NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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NOURSE, EATON & TOLMAN, PROPRIETORS.
OFFICE....102 WASHINGTON STREET.

SIMON BROWN, EDITOR.

SUGGESTED BY THE RETURN OF APRIL.

"Then at this welcome season, friends,
Let's welcome thus each other,
Each kind to each, shake hands with each,
Each be to each a brother."

IN the return of *spring* there is something revivifying to all hearts. We are awakened by new inspirations. The snows are gone. South winds come kindly from distant regions, sweep off the superabundant moisture, warming the soil and bringing a new resurrection of vegetable life. The meaning of the word *April* is, to *open, or put forth,*—and nothing in the whole circle of the *months* more manifestly sets forth the wisdom of God than the new life which everywhere springs into existence around us. "The vital spark rekindles in dormant existences; and all things live, and move, and have their being." The earth puts on her livery to await the call of her lord; the air breathes gently on his cheek, and conducts to his ear the warblings of the birds and the odors of new-born herbs and flowers; the water teems with life; man himself feels the revivifying influence; and his

——"Spirit holds communion sweet
With the brighter spirits of the sky."

The return of APRIL is suggestive of many duties and of many beautiful things. Perhaps the leading thoughts with many are, in relation to the garden and the transplanting of shrubs and trees. While writing, we find before us a letter from Mr. OLIVER P. MEAD, of Middlebury, Vt., so full of just and beautiful thoughts, and so well calculated to arouse new effort to beautify and bless the land, that we drop our pen and yield the space to him. He is full of enthusiasm, and our heart beats responsive to every thought he utters. "I am a great lover of the beautiful in nature," he says. "The foliage of luxuriant trees, with their endless intermixture of colors, gracefulness and beauty, and the bursting into blossom of a thousand flowers, diffusing their sweet perfumes over hill and dale, are sights which I delight to behold.

"What looks more beautiful around a farmer's home, than a group of ornamental trees? There is music in the murmur of the leaves; and how inviting their cool shade on a summer's day! How delightful! How attractive! I admire the wisdom of that man who seeks to make his home attractive, by the cultivation of trees, fruits and flowers. His children will rise up and call him blessed, and his memory will flourish when he sleeps in dust. What looks more desolate than a farmer's home without a tree or a shrub around it? exposed in summer to the burning sun, and in winter to the drifting snows!

"Trees are a substantial comfort, and ought to be cultivated by every farmer. How pleasing to the eye is the home richly embellished with trees and flowers! The great Creator, with infinite wisdom and skill, formed the trees with grace and grandeur, and the beautiful flowers of every hue, and the towering mountains to beautify and adorn the earth! What a desolation would this world present to our view, were it all a far-extended plain, without a tree or a flower! But it is not so; it is clothed with beauty, far surpassing the poet's imagination.

"The most simple cottage, richly adorned with ornamental trees and flower beds, is far more agreeable to the eye than the costly mansion, without the beauty imparted by the green foliage

of luxuriant trees. Flowers and trees are luxuries that can be enjoyed by all classes of society in the country. None are so poor but what they can cultivate them. I love to see a disposition in young persons to cultivate flowers. It shows a refinement of feeling, which those do not possess, who do not admire the lovely smiles of innocent flowers.

"If it were more generally the practice to erect good country residences, and adorn the same with ornamental trees and flowers, agricultural pursuits would be far more attractive to young people. With some men there is nothing beautiful but a money gain. If their wives or daughters cultivate a flower bed, they think it is time foolishly spent. The love of money shuts up every avenue to happiness, and not only makes the man miserable who worships it, but his family also. No one can be happy in this world without they admire the beautiful works of God and worship the only true Deity.

"When I see a neat little cottage, beautifully adorned with evergreens and flowers, and hear kind voices within, the thought occurs to me, how little it costs to make our homes attractive, and those with whom we daily associate happy and cheerful.

"I would invite attention to the great importance of out-door attractions. Every member of a family should have out-door exercise and fresh air. It would be far more beneficial to the health of the ladies, if they would engage in the pleasant and agreeable employment of cultivating a flower garden, and spend less time in the drawing-room. Pure, fresh air is life, and those who perpetually confine themselves within the house do not realize the great amount of injury they are receiving from such confinement.

"Kind readers, cultivate and admire the beautiful in nature, and cherish those finer feelings which were implanted within our souls by a hand Divine. Live a pure life, unspotted from the world, so that when our pilgrimage closes on earth, we can pass away, calm and serene as the summer's setting sun."

For the New England Farmer.

THE FARMER'S PROFESSION.

MESSRS. EDITORS:—During the past few weeks I have been reading, with great pleasure and great profit, the very interesting articles on "Agriculture as a Science," published in your valuable paper. I regard it as a happiness for our country when so many gifted minds from the vast masses of intelligent society in New England, as well as in other sections of this great land, are concentrating their light upon a subject so fraught with interest as that of agriculture, and the more I reflect upon the subject, the more strange it seems that, long ago, it had not found its appropriate place with the other sciences in our institutions of learning; that deriving, as we do, our food, our clothing, our wealth, our very bodies, even, from the soil we tread upon, we, as a thinking people, have placed so light an estimate upon it as the true science to be cultivated next to morality and religion. Indeed, the farmer's duties lie altogether in the line of morality—to say nothing of the religion of agriculture.

It seems to me that the farmer may be said to walk with God in nature. But there will be conflicting opinions, doubtless, entertained in regard to this matter, even amongst the very best educators. Here and there a teacher may be found who will regard the science of agriculture altogether out of place in the schoolroom. But for the most part, here in New England especially, you have hosts of teachers qualified and favorably disposed to introduce their pupils at once to this important science. Amongst these I would mention the scores that annually leave your Normal schools. They, of course, have a thorough knowledge of chemistry, mineralogy, geology, botany and physiology—sciences that lie at the very foundation of agricultural knowledge. With these for a foundation, they are qualified to appreciate a good text book on agriculture, and at once to adapt their knowledge to large classes of those who attend district schools.

In my next I will endeavor to tell you of the manner in which, for many years, I have labored without books, to induce in my large classes of pupils a taste for this pleasant, useful and vastly important science. A TEACHER ABROAD.

Northampton, Mass., Feb. 16, 1863.

REMARKS.—Thank you, sir. You encourage and inspire us. Our columns are open to you.

For the New England Farmer.

WOOL GROWERS' ORGAN.

At a meeting of the Directors of the Vermont State Agricultural Society, held at Bellows Falls, on the 12th inst., the following resolution was adopted:

Whereas, Daniel Needham, Secretary of this Society, has received communications from Pennsylvania, Ohio, Michigan and other Western States, as well as from parties in our own State, encouraging the establishment of a Wool Growers' organ. And,

Whereas, Propositions have been made to him by publishers in other States, as well as our own, for the establishment of such an organ. It is

Resolved, That in consideration of the fact that we find it difficult to decide, at the present time, what course to pursue, the whole matter be postponed to our next meeting, and that, in the meantime, our Secretary be requested to continue his correspondence on the subject, with the view of enabling us to reach some definite conclusion hereafter.

HEALTH AND STRENGTH.—A man who takes proper care of himself, and indulges in plenty of air, exercise, and, above all, recreation, ought to be in a high range of health and strength from twenty-four years to sixty-five.

NEW COTTON FIELDS.—Experiment has shown that cotton can be cultivated in California, while in Utah, cotton raising has become quite a business, 70,000 pounds of very superior quality having been grown last year.

For the New England Farmer.

THE CLOVER PLANT.

The importance of the clover plant in all systems of rotation which have for their object not only profitable returns, but the keeping up of the fertility of the soil, can scarcely be overrated. Well did the good knight Schubert, more than two hundred years ago, promise the peasants of Germany that, if they "would grow clover, they should have ample cause for rejoicing, and of praising the Lord out of the fulness of their hearts, for His rich blessings." In pursuance of this advice "clover became," in the words of Thaer, "the basis of agriculture, the pivot on which it should turn," which in a system of rotation with other crops "yields an advantageous produce, and at the same time maintains the soil in a favorable condition for the following crops." If this was true of German agriculture it is equally so of that of many sections of this country. Mr. Geddes, in his survey of Onondaga Co., for the New York State Agricultural Society, opens his chapter on practical farming with these words: "The agriculture of Onondaga County is based on the clover plant. It is used for pasture, for hay, and for manure. Strike this plant out of existence and a revolution would follow that would make it necessary to learn everything anew in regard to cultivating our lands."

Properly managed, it is equally important on many soils, to the New England farmer. Hence we would offer sundry further suggestions as to soils and seeding.

The soils most favorable to clover are those containing both lime and clay; not too great a proportion of the latter, but rather that known as a clayey loam. On such a soil, in a proper state of cultivation, it is, according to Thaer, "in its native abode; nothing is required beyond the spreading of the seed—the clover gets the better of all the plants that grow around it." It will thrive on any soil of moderate depth and fertility, if favored by a season of sufficient moisture. Sandy loams, however, are often deficient in lime, and also overcharged with acids, as shown by the growth of sorrel and dock, which are apt to overgrow the clover; but ashes or manure will so stimulate the clover that it will finally succeed. It is said that a mixture of ashes and gypsum is much the best top-dressing for clover, on very acid soils, greatly increasing its growth.

Clover is best sown with some other crop, because it rarely yields much the first year, and in the early stages of its growth it is assisted by the protection of other grain, which should be removed as early as may be; for "the sooner," says Thaer, "the crop with which clover is grown is harvested, the greater the growth of the clover." In my experience I have found it to succeed best with winter wheat and rye, next with spring wheat, next with barley, and lastly with oats.

A good deal of clover seed has been sown which has failed to produce the intended crop, and various causes operate to hinder its vegetation or to destroy the young plants. One cause of non-vegetation is the deep covering, or no covering given the seed. Sown on spring grain, and harrowed in with a heavy harrow, much is placed too deep to be able to grow. Or, if sown on the fresh soil, after the grain is covered, without any after treatment, unless a heavy rain comes soon to wash it into the soil, the failure is equally sure. On winter grain it is sometimes lost because sown too late. If sown in March, or as soon as the fields are bare, the freezing and thawing of the soil will furnish a proper covering for clover seed; on spring grains I would rather use the roller after sowing, or pass over it with a light brush harrow,

Another cause of failure, and one from which we have suffered more than any other, is the drought often occurring in early summer, before the young clover gets sufficient growth to withstand its effects, and it is burned or dried up. Remedy: the earliest sowing practicable, and manurial aid to induce a vigorous growth. Gypsum, or plaster, usually proves such a stimulant. A light top-dressing of fine manure harrowed in with the spring grain, is equally beneficial, and if the soil is not very fertile, should be given, in addition to the dressing of plaster and ashes.

On land run down to a very low state of fertility, some such treatment is absolutely necessary; but once secure your clover crop and you may redeem the land. H.

For the New England Farmer.

HUNGARIAN GRASS.

It may prove a satisfaction, (if not a benefit,) to the young farmer who made some inquiries a few weeks since, in relation to Hungarian grass, for me to say I have cultivated, on an average, from four to five acres, for five successive years. I have now, January 31, 1863, one bushel and two-thirds of seed, measured out for the five acres I design to devote to the crop the coming season. For two years past, my seed has been mostly sold to dealers, at about one dollar per bushel. I have frequently sowed other grass seed with Hungarian, for future crops of hay, and have never failed of a first-rate catch.

Hungarian, (like other grains), varies in weight according to its perfection, from 44 to 55 pounds per bushel. It would be entirely superfluous for me to say I like it. I only state facts. Let "More Anon" theorize. Where there is a plenty of everything, spice will be enjoyed by those who like it.

May we expect something before spring opens, through the columns of the *Farmer*, in relation to the propriety of cultivating sorghum in New England, as a means of obtaining saccharine matter for household purposes? WM. RICHARDS.

Richmond, Mass., 1863.

For the New England Farmer.

BRAIN IN BUTTER AND OTHER ARTICLES.

MR. EDITOR:—Farmers complain that cultivation of the soil renders them but a small return. Without doubt this is frequently the case, but why is it? The fact is, the farmer puts in little, expecting to take out much—to reap when he has not sown. The great lack is in not taking a business-like view of the matter. The merchant invests money in goods; if he gives half his time and attention to the store he expects to receive pay in proportion, in addition to a fair percentage for the use of the capital. The farmer has an idea that, some how, his business will go on of itself—that he can lie still on wet days in summer and sit by the fire in winter, without diminishing his annual gains. This is not so; he cannot put in

six or nine months' work and take out pay for twelve months. One year with another, every intelligent farmer may depend on receiving a fair per cent. on his capital, together with reasonable pay for his time actually bestowed.

Let the hard-working yeoman give himself, and his family, and his cattle plenty of relaxation. "Covetousness bursts the bag," is an old maxim, and constant pull, pull, pull, wears out mind and body both. Yet indolence is not enjoyment; nor in that way does the body or mind recover tone or strength. Do not, however, grumble to find, at the year's end, that your play has cost money. Make everything as valuable as possible before you sell it. If your dairy produces butter, let it be the very best; so of your cheese and your maple sugar. Study all these things and your reward is certain. Remember this, that the more *brain* you put into your products the higher price you will get for them. Do not understand, Mr. Editor, that I broadly charge indifference and laziness upon all our agriculturists; by no means. I merely offer these suggestions, hoping that some who aspire to better things, may receive therefrom hints which will profit them. D.

Claremont, N. H., 1863.

Remarks.—Please forward the articles spoken of.

INFLUENCE OF FOOD ON THE QUALITY OF WOOL.

The remark is quite common among people who live in the city and who have at some time resided in the country, that they will purchase pork only of those who feed it with corn, milk, grass and vegetables,—never of those who use the blood and offal of the slaughter-house. There is good cause for such preference. The flesh of a hog, for instance, that has run in the pastures and woods, and fed mostly upon the roots of grass and bushes, acorns and nuts, for most of his life, will be so strong as to give positive evidence of it, even while it is cooking. This is often the case where the animal may have been fed on grain in his pen for several weeks previous to being slaughtered.

It is generally supposed that the beef of an ox fed in pastures affording an abundance of young and tender clover and other rich grasses would be sweeter and every way better than that of an ox fed in a pasture of coarse and innutritious herbage, though both attained the same weight. The *quality* of the feed certainly affects the flesh, and we believe it to be pretty well settled that it also affects the *hair* of the animal. It is finer, softer and more glossy on the well-fed horse, ox or cow. Why should not the same rule hold good with regard to the sheep?

The food of an animal—and of ourselves—is much more rapidly diffused through the system, transformed into chyle and assimilated into blood and nutriment, than most of us are aware of. The case of an ox eating a single onion is in point. A butcher was driving an ox half a mile from his yard to the slaughter-house, where he was immediately dressed, and the next day carried about to customers. On his next round they all complained that the beef tasted so strong of *onions* that they could not eat it! Upon inquiry of the person who sold the ox to the butcher, it was ascertained that he had been kept in his stall, and that not an onion had been raised upon the farm that year. The fact was clear, however, that the flesh of that animal was strongly impregnated with the peculiar odor of the onion, and greatly to the discomfort of the neat and conscientious butcher. Revolving the matter in his mind as he went his daily rounds, he at length recollected that in driving the ox along the road he picked up something which he supposed at first was a small potato, but which he saw was an onion before the ox had got it fairly into his mouth. The flesh of poultry is sometimes sensibly affected by their running under some of the back buildings of the farm, where they never should be allowed to go. If the flesh of animals is thus acted upon by the food they eat, we see no reason why the skin and hair, or wool, should not be, also, in some degree.

In a work on "Fibrilia," advocating the introduction and use of flax in the place of cotton, by Stephen M. Allen, Esq., of Roxbury, Mass., we find an article on *wool*, which has some interesting references to the subject in question.

In speaking of wool as not being peculiar to sheep, but forming a sort of under-coat beneath the long hair, in the goat and many other animals, it says: "The fleece of the domestic sheep has been greatly improved and modified by circumstances of *climate, pasture, shelter* and judicious crossings of breeds, by which many varieties of wool have been grown, chiefly divisible into two great classes of *carding* and *combing wool*. The occurrence of hair in the fleece of the domestic sheep is now rare, and is considered as indicative of bad management; but if sheep are left to themselves on downs and moors, there is a tendency to the formation of hair among the wool. *Change of pasture has a marked influence on the quality of the wool.* If sheep that have been fed on chalk downs [this term "downs" is applied in England to a tract of poor, naked, hilly land, used only for pasturing sheep,] be removed to richer pastures, only a month before shearing, a remarkable improvement will take place in the fleece. So, also, sheep that occupy lands within a few miles of the sea will produce a longer and more pliant wool than that of sheep from more inland districts.

"Wool varies in quality in the same flock at different times. When the sheep is in good condition, the fibre is brilliant; but in badly fed or diseased sheep the wool is dull and dingy, and when cut from the dead animal it is harsh and weak, and takes the dye badly."

The effect of innutritious feed upon sheep, as

described by Mr. ALLEN, corresponds to that upon other animals, and every farmer who is observing will soon make the discovery for himself. The superior quality of the sea island cotton probably arises from the peculiar circumstances under which it grows,—that is, having a rich soil in which to stand, and *a warm but humid atmosphere* during nearly the whole period of its growth. The saline vapors from the sea may have an influence upon the plant, as they are said to have upon the sheep. Its culture has been attempted in various countries and localities, but never, we believe, with such success as attends it on the coast of South Carolina and Georgia.

It is said that the fleece of a fine-wooled sheep may be changed into that of coarse wool, and *then hair*, by a change of feed and locality—from highly nutritious food and a warm or temperate climate, to coarse and non-nutritious food and a rigid climate,—that is, nature tries to accommodate the animal to the new condition in which it finds itself placed.

If these are facts, they should be guides to the farmer in the management of his flocks. He should learn, by comparison, whether his locality and the quality of his feed will bring as much mutton and wool as those flocks kept in other localities within his knowledge. If not, then he should change his position, or abandon sheep for the culture of some other crop better adapted to his circumstances.

For the New England Farmer.

LETTER FROM MR. FRENCH.

Washington, D. C., Feb. 6, 1863.

MY DEAR MR. BROWN:—My old habit of reporting progress to the *N. E. Farmer*, in my wanderings, prompts me to say something to you of what I see and hear in this central position of political affairs, although I have no idea of occupying any of your open space with politics. Do not infer, however, that I join in the silly, common-place cry against politics and politicians. The great mistake of the country is, that we have not given attention enough to education in political affairs; but still, my belief is, that our country is as well governed, and its affairs as honestly administered, as "the lot of humanity will admit." If each of us will do his best, instead of grumbling at the rest, all will yet go well.

THE SOLDIERS.

Most of my time here has been devoted to looking after the welfare of the soldiers. The officers of the Sanitary Commission and of the Massachusetts and New Hampshire Relief Associations, have given me every facility for observing their operations, and I will say, in general, that I am surprised to find how perfect and thorough their systems have become, in affording relief to the suffering soldiers.

THE UNITED STATES SANITARY COMMISSION.

It may be a satisfaction to your readers, all of whom have friends in this war, to understand clearly the scope of the operations of the various institutions for the comfort of our brave defenders. The Sanitary Commission operates widely over the whole country, not limiting its benefits to any class or section. In general, its immense stores, collected from every loyal part of the Union, are distributed, upon requisitions from the various hospitals. Whenever a battle occurs, this commission is foremost on the field, with supplies of all kinds for the relief of the wounded and suffering. In Washington I have had opportunity to observe more particularly its operations, and when I tell you that Mr. Olmstead, author of "Walks and Talks," of "Seaboard and Slave States," and chief engineer of the New York Central Park, is general Secretary, you may be sure that its affairs are faithfully and energetically administered.

I should like, had we space, to give you a full sketch of a day with Mr. Knapp, the agent of the Commission for special relief. Among the rest, we visited some of the Lodges, which are indeed homes for the soldiers, where every deserving man, who wears his country's uniform, is welcomed to food and lodgings. Some two hundred soldiers are daily discharged from the armies in this neighborhood, many of them from the convalescent camp, which is about four miles from Washington. Most of these are sick or wounded, and nearly all of them came directly here.

In general they have no money nor friends, and would wander, suffering, in the streets, without some assistance. To these the Sanitary Committee brings instant aid; every soldier who is discharged is directed to its rooms. The police of the city, and other agents, are constantly on the watch to report every case of a soldier who needs assistance, so that it is hardly possible that any should escape notice. At the lodges, usually, two or three hundred, every night, find comfortable beds, and twice that number are daily furnished with a good dinner, and sent on their way. I helped one day to distribute dinner tickets to about two hundred and fifty poor fellows, who had been discharged, and were waiting, most of them, for their pay, before going to their homes; and a more truly thankful set of men I never saw.

I conversed with many from New York, Pennsylvania, Wisconsin, Michigan and all New England. They were all good, manly fellows, intelligent and thoughtful, and all full of pleasant anticipations of home. The Sanitary Commission assists them to get their proper discharges, and to receive their pay, procures their tickets homeward at reduced prices, keeps them safely at the "Home," near the railroad station, till the train is ready, protects them from the sharpers and thieves, who are constantly hunting them down, and sees them fairly on board the cars. You may thus get some idea of the usefulness of this commission, in some details, though of its vast system of aid to the hospitals throughout the country, I have not time to write. If the Sanitary Commission had funds enough, and its system could be carried out, no other society would be necessary to the care of the soldiers, but with all that it can do, there is yet room for more laborers, and among the agencies for good to the soldier, no one is more efficient than

THE MASSACHUSETTS SOLDIERS' RELIEF ASSOCIATION.

The special duties of this society are towards Massachusetts soldiers. Its rooms here are sup-

plied with hospital stores, furnished by the charitable men and women of Massachusetts. Its agents visit the various hospitals and camps, and procure lists of all the soldiers who need assistance. Gardner Tufts, Esq., Treasurer and principal agent of the association, an energetic, devoted, practical man, gives to the work his whole time, seeing personally to the application of the means committed to the society for distribution.

It seems to me, that the various societies in Massachusetts, especially of ladies, who are laboring for the soldiers, are hardly doing for this association, so much as it fairly demands. There was not, when I was last in their rooms. a single flannel under garment on hand, and daily calls were made for such comforts. I can assure your readers, that any money, or articles of clothing, or delicacy for the sick, is as sure of being judiciously applied to the use of some suffering Massachusetts soldier, as if the donor went personally and saw to its application. I am impressed with the importance of liberally sustaining this association, having seen with my own eyes how, like ministering angels, its agents perform their duties. Their attentions are personal to the individual case. They pass through the hospitals, and note down the wants of the Massachusetts soldier. His name is entered on their books, and the needed articles of food, or medicine or clothing are carried and given to him whenever necessary. Correspondence is opened with his friends; he is watched and cared for, till he is well enough to come out of the hospital, and then is sent homeward, or back to his regiment.

I wish to impress upon the kind hearts of friends at home, the fact that their liberality is not lost, that their efforts are successful, that their contributions reach their destination surely, through either of the societies I have named, as perhaps they do through other channels. Sending packages to individual soldiers in the army, who are in health, is probable the worst disposition of our means. More than twenty thousand such packages were not long since, at one time, here, that could not be forwarded. These would have been of almost countless value to these relief associations. Still, New England is rich, and can give always, and, to all worthy objects, and they who think first of their own household, do not forget their neighbor's.

Truly yours, HENRY F. FRENCH.

HOW TO TAKE CARE OF HARNESS.

In answer to the inquiry respecting the kind of oil for harness, I give you the results of my observation for more than thirty years, holding myself responsible for the conclusion I have drawn therefrom.

It is amusing to read the receipts for preparation, said to be "excellent for leather." Many appliances are resorted to, in order to give a gloss to leather; that which is composed of shellac forms a crust on the surface, which tends to crack the grain, and is therefore injurious. Few take any care of harness; many take improper care.

Whenever leather is wet, it loses a portion of its oil, and if suffered to remain wet long, it will lose all of this substance; and if this is not restored, the leather becomes dry and brittle. The grain will shrink and crack, when the life is gone.

Leather should be kept clean, for dirt of any kind will absorb the oil. The more leather is used and exposed to wet, perspiration of the horse or other cause, the more frequently it should be oiled; it needs oiling oftener in summer than in winter; if not used at all, it should be occasionally oiled, to keep it supplied with what is lost by evaporation. The patent leather parts of a harness, such as winkers, saddle, &c., should be rubbed over with some clean, soft oil, and immediately wiped off with a soft, woollen rag or chamois leather; this is all the care those parts need. When not used, harness should be hung up in a dark closet, as cool as possible, but not damp; it will stand the cold of winter better than the heat of summer.

To clean and oil a harness, hang it where all parts can be reached easily; (it would be better to unbuckle every strap;) wash clean by a sponge or woollen rag with blood warm water and castile soap, using as little water as will do the work; when two-thirds dry, apply the oil with a woollen rag, pulling each strap through your hand; be careful that where the buckle holes are, a little more is applied; also the belly-bands, breechings and the straps that buckle in the bits need an extra allowance; let it remain in a warm place for a few hours, (not in the hot sun, or before a hot fire,) until the oil has well entered the leather; then rub off all that remains on the surface briskly with a dry, woollen rag, and your work is finished. Be careful that you do not apply too much oil, and be equally careful that you apply it often enough.

The best oil for harness, is one quart neats foot oil, four ounces beef's tallow and three tablespoonfuls lampblack; add four ounces beeswax, for use in summer weather.

Ohio Farmer. GEORGE F. MARSHALL.

EXTRACTS AND REPLIES.

PROFITS OF POULTRY.

My stock was seventeen hens and one rooster, and the account is for one year. The manure pays for the care.

Eggs, one year	$22,25
Poultry sold	10,69
	$32,94
Cost of keeping, and raising 38 chickens	16,62
Profit	$16,32

The hens were kept in a house and yard all the time, but an hour before sunset, each day, when they were let out and allowed to ramble where they pleased. The chickens went out at will. Breed, Bolton Grays. I think they are the best to lay. They are of moderate size. My house is 10 by 12 feet, and yard 25 by 30. In this way I think they do better than to run at large; at least, it costs less to keep them, and the hens hatch better, because they come from the nest, always find food before them, eat and return to the nest before the eggs are cooled. ISAAC HOUSTON.

Hanover, N. H., Feb., 1863.

SAP BEER.

I wish to ask through your paper if you know of a good recipe for making sap beer? If so, please give it in your paper soon, and oblige your humble servant, NATHAN CUSHING, JR.

Woodstock, Vt., Feb., 1863.

REMARKS.—In the Monthly *Farmer* for May, 1858, page 247, Mr. THOMAS G. HOLBROOK, of Manchester, Vt., has a recipe as follows: "Take one pound of good hops, put them in a clean barrel and take it to the orchard; fill the barrel with sap and set it away

for use; in about two weeks it will be fit for drinking, and will remain good till June.

DORKING, HAMBURG AND COCHIN CHINA FOWLS.

Will you inform me where I can purchase a few full blood, five-toed, white Dorking. Hamburg or Cochin China fowls? JACOB P. CILLEY.

Exeter, N. H., Feb., 1863.

REMARKS.—Mr. JOHN S. IVES, of Salem, Mass., can probably furnish them, if he has not the particular kinds you desire in his yard.

RAISING MUSHROOMS.

If you have at command practical directions for raising mushrooms, you will oblige many readers by communicating them. I tried the experiment according to rules given in the *American Agriculturist*, and made an utter failure. INQUIRER.

REMARKS.—Will some one reply who has the knowledge?

LEGISLATIVE AGRICULTURAL MEETINGS.

REPORTED FOR THE N. E. FARMER, BY G. W. CHASE.

Monday evening, Feb. 16, the subject for discussion was, "How to Make and Apply Manures."

The Chairman, (Mr. TOWER, of Lanesboro,') considered this the most important subject to the farmer, and urged the importance of more precision in the making of experiments to restore the fertility of the soil. Barn manure is the best we have, but we have not enough of it. It was important that farmers should know what particular elements were either in excess or wanting in their soils. Muck is one of the most valuable materials the farmer can use to compost with his barn manure. He thought the best way to use it was to keep large quantities in the barn yard to act as an absorbent. Concentrated manures should be composted. He had conducted a three-year's experiment in the application of manures, as recommended by the State Board of Agriculture in 1859. He had been very exact in this experiment. In plot No. 1, the manure was ploughed in from eight to ten inches deep; in No. 2, it was ploughed under about four inches; in No. 3, it was simply harrowed in; in No. 4, it was left upon the surface, and No. 5 received no manure at all. The result each year was as follows:

FIRST YEAR.

No. 1 gave	858 lbs. corn,	800 lbs. stover.
No. 2 "	951 " "	728 "
No. 3 "	909 " "	692 "
No. 4 "	753 " "	640 "
No. 5 "	672 " "	510 "

SECOND YEAR.

No. 1 gave	418½ lbs. oats,	675 lbs. straw.
No. 2 "	387½ " "	641 " "
No. 3 "	330 " "	510 " "
No. 4 "	304½ " "	460 " "
No. 5 "	247 " "	391 " "

THIRD YEAR.

No. 1 yielded	646 lbs. hay.
No. 2 "	725 " "
No. 3 "	590 " "
No. 4 "	510 " "
No. 5 "	320

He was satisfied that manure should be covered, to get the full benefit of it.

Mr. HOWARD, of the *Cultivator*, alluded to the practice of "paring and burning," and thought that it might be done to advantage in many cases. He once saw a crop of 600 to 800 bushels of turnips raised on one acre, without other manure than the ashes from burning the turf. He considered the process only applicable to wet clay lands.

Mr. HUBBARD, of Sunderland, believed wood ashes the cheapest and best manure he could use. He had experimented with ashes, lime, and plaster, and found that the rows where ashes were applied were of a deeper green throughout the season, and gave nearly a double crop. Applying ashes to the hill at the first hoeing, almost doubled the crop. He had also applied ashes *in* the hill, and with good effect.

Mr. FLINT, of Boston, spoke of the experiments recently made in manuring, in answer to the recommendation of the State Board of Agriculture. Fourteen persons had undertaken and completed the three years course, and the results are to appear in his forthcoming report.

Mr. FLOWER, of Agawam, said that manure is the life of the farmer, and that every farmer should endeavor to make as much as possible. He throws all his manure under a shed, and allows his hogs to root it over thoroughly. He thought the best way was to plough in his manure, and then to apply some in the hill. This starts the crop quickly, and carries it through the entire season.

Mr. DREW, of the *Ploughman*, referred to his experience in the use of burnt turf and peat ashes, and said he wouldn't give one bushel of wood ashes for a hundred from peat. He had used all the ashes from twenty cords of peat upon a garden of about one hundred feet square, and never saw any benefit from the application. He believed in the application of the peat itself to uplands, and had repeatedly seen its good effects—even for years after its application. In regard to superphosphates, he wished that we might have more carefully conducted experiments to prove their actual value. He cautioned farmers against placing too much confidence in the concentrated manures of commerce.

Mr. WETHERELL, of the *Cultivator*, had experimented some with superphosphates—Coe's & Rhode's—and they did not pay for the labor of using them. His brother had tried them, and found the grass crop doubled. He experimented with superphosphate, plaster, lime, hen manure, and barn manure, and the superphosphate gave the best crops of all.

Mr. MOSELY, of Springfield, believed that guano was a valuable fertilizer, and was best on light soils. He mentioned an experiment where it had proved of no value on one side of a road, while directly opposite it had a manifest benefit on the same kind of crop. He thought that *sand* was a better absorbing material than muck. It was easier procured, and he thought it was equally as valuable. He believed it was economy to stable cows at night in the summer. He mentioned a case where an acquaintance bedded sixteen horses entirely with sand. This was composted with plaster, and applied to a tobacco crop with great results.

Mr. KENDALL, of Boylston, said that until within about five years he had made his manure in the barn-yard. He now thinks that by so doing he lost one-half its value. Latterly he uses large quantities of soil to mix with the droppings in the stable. (He stables his cows at night throughout the summer.) By this method he

doubles both the quantity and value of his manure heap. He *always* ploughs in his manure.

Mr. Goldthwait, of Longmeadow, believed that *sand* was of great value, as a "divisor and absorbent." He made large use of it for that purpose. He argued that it cost much less than muck, was more easily handled, and was equally as valuable. (So the reporter understood the drift of his remarks.)

For the New England Farmer.

PLANTING AN ORCHARD.

In May last I set out about three acres to apple trees, the result of which was so favorable that I am induced to give the details of the operation for the benefit of those who may contemplate setting trees, and desire the experience of others in deciding on the most proper method of doing it.

Before proceeding to the statement, however, I would suggest that every one should select their own trees, or obtain some reliable man to do so for them. However *honest* the nursery-man may be, it is rarely the case that trees not selected by the *purchaser* give full satisfaction. Some will be found crooked and misshapen—roots mutilated, or some serious defect about them in the eyes of the purchaser. I confess to this folly myself. Contracting for trees two years from the bud, and all good, straight trees, well rooted, &c., I got many that were three and four years old and deficient in roots. Some were even eaten through with the canker worm, and condemned as worthless.

But to the setting. I laid out the ground so as to allow thirty-two feet space each way between the rows,—dug the holes eight feet in diameter and two feet deep,—put the surface soil by itself and threw aside the subsoil.

After the holes were dug, I put all the surface soil in the bottom of the holes, which raised them in most cases sufficiently for the trees to set upon. I then hauled from one corner of the lot, where two roads crossed each other, a wash deposit from the roads and slopes converging there, and set the trees in it,—most carefully spreading out the fibrous roots and filling in all interstices with the very finest of the material used. This mud wash was thrown up in piles the fall previous for the action of the frost upon it to pulverize, &c. After the trees were well set with this, I had a space to fill all round the holes to the depth of four inches at the outer edge, and about half that depth at the centre, which I filled up with good muck, dug the year previous. As it was late in the season when the trees were set, I feared that dry weather might injure or kill them. I mulched with bog, or fresh hay. As the season was very dry here, this precaution proved to be a wise one, as I lost but one tree of the whole set out. Owing to the absence of rain the growth was very slow until midsummer—after that unusually fast. I have now some fears that the growth continued so late into the autumn that the winter may injure the immature wood.

What some term the Hessian bug, made sad work with the leaves of many of the trees, especially the least hardy, apparently killing some of them. These I cut off about the fourth of July. Some of these, after that, sent out shoots from one to about four feet in length, which I regard as quite remarkable. For the winter protection of the trees, I took away the mulching and filled up around the trunk to the depth of eighteen inches with muck, which I propose spreading in the spring, putting ashes with it, and dig in slightly to the soil, which is a sandy loam for the most part.

I will state that I do not approve of lifting or shaking the tree when setting, to straighten the roots or work the loam around them. I verily believe it results in evil and only evil. As you draw up the tree, of course those roots that were well spread and straight are hauled out of place, and of necessity cramped and crooked as it settles. The loam should never be *thrown* on to the roots or against the tree—as in the one case it cannot be properly worked in among the roots, and in the other will displace the tree from its true position in the row. O. K.

Rochester, Dec., 1862.

OPEN AIR GRAPE CULTURE.

In the *Farmer* of July last, we gave three or four illustrations of the management of the vine in *open air grape culture*, from a new work on the subject, by Mr. John Phin. We present two or three illustrations now, feeling that we cannot better supply a general want of our readers than in so doing—for it is not the gardener only, who feels it, nor the farmer or mechanic, for the day laborer, even, who owns his rood of land, has become satisfied that the perfect grape is *healthful in its culture, ornamental in its place, exceedingly grateful and restorative to the sick, and wholesome as an article of food for persons of all ages.* There is no mystery whatever in its cultivation, and none should be deterred from attempting it from a fear that they shall not succeed. Indeed, some of the best examples of its success may often be found in the door-yard of some person who does not own four square rods of land, but who supplies the three important things which the vine needs—namely, a moderately rich, *moist*, not wet, porous soil—shelter from high winds, and constant attention in pruning and cultivation. Mr. Phin says:

The vines having been carefully taken up and the holes properly prepared to receive them, the next step is to set them out, and in doing this the following points require special attention:

1. That the roots be disposed in their new location as nearly as possible in the same position that they occupied before their removal.

2. That some fine, friable, mellow mould be placed in immediate contact with the roots.

3. That no fresh manure or decomposing organic matter be allowed to come in direct contact with the plant under any circumstances whatever.

4. That the soil be firmly packed about the roots, no air spaces being left. In doing this, however, do not tread down the plant with your whole weight, as you will thus be very apt to tear off some of the roots, but work the soil in with your hand or a pointed stick.

In general it will be well to insert the plants a little deeper in the soil than they were previously,

as, owing to the mutilation which of necessity takes place, a greater draught is made upon the roots for moisture than they can support when thus shortened, if they are placed near the surface. But this point requires the exercise of discretion, and a good substitute for deeper planting will be thorough mulching.

As roots always spring from a bud or joint, and rarely from the internode or portion between the buds, the mode of propagation by which the plant has been produced will exert considerable influence upon the *modus operandi* of setting it out.

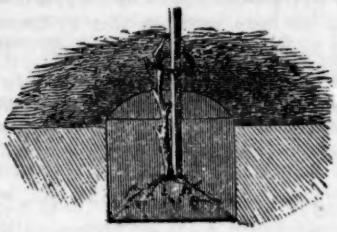

Fig. 1.

In figure 1 is shown the proper disposition of the roots of a young plant raised from a seed or from a single eye. In this case the roots all proceed from within a short distanee of each other, and from the base of the stem. In setting out such a plant, the better plan is to throw a shovelful or two of fine mould on the bottom of the hole, so as to form a conical heap, the top of which should be just at a suitable height to support the base of the stem in its proper position. Then, having placed the plant on the top of this little mound, spread out all the roots equally and naturally over its side and fill in with pulverized soil, being careful to pack the soil firmly around the roots, yet still leaving it mellow and porous.

The soil ought to be raised some inches above the surrounding ground, the amount depending upon the size and depth of the hole dug. All filling in is apt to sink, and unless this is done, the plant may be found after a few weeks to be too low. Some, however, prefer to have the plant set in a hollow, claiming that a basin is thus formed which catches and retains the rain. We would rather rely upon good mulching for obtaining the requisite amount of moisture, but if this is dispensed with, and recourse had to the former plan, we should prefer to have the hollow or basin in the form of a ring around the edge of the hole, leaving the stem surrounded with a little mound which will shed the rain. The stem is thus kept dry, and the moisture is guided just where it is

Fig. 2.

wanted, viz: to the extremity of the roots. Figure 2 gives a sectional view of the soil so arranged.

When vines have been raised from cuttings consisting of several eyes or joints, there will in general be several layers of roots—the plants having the appearance shown in figure 3.

In this case it will be necessary to proceed as directed for plants from eyes in so far as the lower layer of roots is concerned—the upper layers

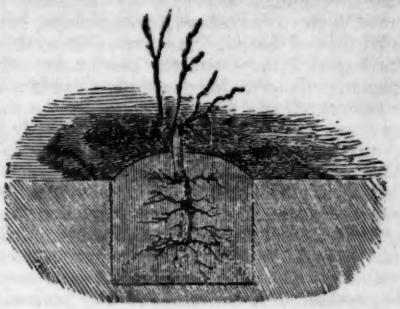

Fig. 3.

being held up while this is done. After the first layer has been properly covered, the next layer is laid on the surface of the soil which covers the lower layer, and after being properly disposed is covered in turn, which process is repeated until all roots are imbedded in the soil.

EXTRACTS AND REPLIES.

ABORTION IN COWS—DISEASED PIGS.

In your issue of Jan. 24th I find some remarks concerning cows losing their young. In the Albany *Cultivator*, for July, 1862, is a communication which relates to the subject. The theory is that the disease is caused by the bull. A cow by fighting, or by some accident, loses her calf. She will be in heat in two or three days. The bull is suffered to go to her while her organs are diseased. He afterwards serves healthy cows, and communicates the disease to them, and they in process of time lose their calves. Some cases are given which make it appear plausible. The theory was new to me, but I think is worthy of consideration.

In the *Farmer* of Feb. 14th, a correspondent speaks of disease in pigs. I would like to inquire if they were littered with meadow hay? Some of my neighbors think that is sure death to pigs.

Fitchburg, Feb., 1863. Abel F. Adams.

"NO FAITH IN THE PROFIT OF ORCHARDS."

In the statement made by Dr. G. B. Loring, of Salem of his magnificent farm, on which is one of the finest orchards in the eastern part of Massachusetts, occurs this sentence, "I have no faith in the profit of orchards." Why the doctor should so strongly denounce what his ancestors so sedulously labored to cultivate, I cannot readily understand. I had supposed that an orchard of choice fruit trees, in good condition, was one of the most pleasant and profitable appendages of a farm. Suppose such an orchard to contain forty trees to an acre. Is it unreasonable to suppose that it will yield three barrels of apples to a tree annually? In what way can the land be more advantageously used? I have trees that have yielded apples of the value of five dollars a year, for the last ten years, and this without any extra care or culture. Let his orchard do this, and I believe it would be the best use of his land that can be made. P.

THE BEST ONION TO SOW.

In answer to the inquiry of S. A. G., of Lawrence, in your last, I will inform him, from experience and observation, that the true Danvers Thick, or Oval Onion, is the most profitable as a market crop; as they are very productive bearers, and measure much better than other varieties. This variety is raised almost universally in this part of the country.

Salem, Feb., 1863. J. S. Ives.

For the New England Farmer.

DOGS, GUNS, RODS.

MR. EDITOR:—I am a farmer, heart, soul and hands. I work with a will in my vocation. I am proud to be a hard-fisted, strong-armed, brown-faced tiller of the soil. It is my ambition to keep the largest amount, and the best quality of live stock in town, according to my acres, and of course to raise the largest and best crops for the size of my farm; and I do it, too, as the figures will show on the records of our club. How do I do it? Why, by taking and reading the *New England Farmer*, *Country Gentleman*, *Horticulturist*, and other periodicals and standard works pertaining to the business of a farmer. I study them just as a builder would study works on architecture, an apothecary the Pharmacopœia or Dispensatory, or the physician or lawyer works on their professions. And here is the secret of my success. I would earnestly recommend and advise all who are engaged in agricultural pursuits, whether in a large or small way, to study their profession. It will be for their interest to do so; it will bring money into their pockets and respectability into their houses and neighborhoods. To excel, will give them influence in the community among whom they live, and a position to be envied among their townsmen.

Although I work, as I stated in the beginning of this article, still I am in favor of a reasonable amount of recreation at proper times; and I have it and enjoy it. I am fond of gunning and fishing; I am fond of a good, well-trained dog, and I am happy to say that I possess one who understands his business. Show Pete a gun and he is on his muscle at once; and while I do not allow a small bird to be killed on my premises, still, at proper seasons, whatever is recognized by the statutes as "game," must look sharp or I have them.

Now I will tell you what I had in my mind when I commenced this article. As farmers cannot afford to take more than two or three papers, and yet want a varied amount of information, I have thought that if you would devote a part or the whole of a column occasionally to the dog, gun and rod, it would give additional interest to your already invaluable paper. I do not want our boys to be encouraged to shoot everything that wears feathers; on the contrary, tell them to "spare the birds." But well engraved portraits of those recognized as *game*, also portraits of all useful breeds of dogs, with descriptions of them, would be very interesting to many of your readers.

Brook and pond fishing would also interest the boys, and is certainly a pleasant and healthful recreation, and to kill a "trout, who swims in speckled pride," is verily an accomplishment. I read with much interest and pleasure the articles you have published on ornithology, as well as everything else that appears in your paper.

Your friend and constant reader, from the days of good old father Fessenden until to day,

Lauderdale, Feb., 1863 J. L. M.

REMARKS.—Excellent. Not only full of just the right kind of pluck and fire, but every sentiment is such as beats responsive in our own bosom. We, too, love the gun, the dog and the rod, and our old English "double-barrel" is among the things that we should last part with. It has often been the source of health, amusement and "*something good to eat.*" The quail, deer and wild turkeys have often heard from it to their sorrow, over a considerable portion of that splendid country from the base of the Cumberland Mountains to the lower end of Chesapeake Bay, a country now deluged with human blood, and destroyed by fire and sword. Many a day have we tramped with it in hand through the Mount Vernon forests, or on the opposite Maryland shores, or sported among the ducks on the broad bosom of the Potomac itself. It was on these occasions that we learned the strong instincts and the deep gratitude of the dog. We love him still,—and yet, we sacrifice all our partiality to the public good. If all dogs were like yours, and kept in proper retirement, the probability is that little damage would be done by them.

Will you set us an example of such articles as you would like to see in the *Farmer*, on the subject of gun, dog and rod? Do so.

For the New England Farmer.

THE OLD FOLKS OF THE STABLE.

No offence is intended by the heading of this article, to the old folks at home. The writer has no thought of ousting them from their cozy quarters under the family roof, and stowing them away in the barn, to make room for the young folks. He would rather bespeak for them all a "sweet home" to cheer their winter of life, and many a comfortable doze in the old arm-chair, through the long winter's evening, in blissful unconsciousness of trouble or care. But old age is not peculiar to human life, though it claims in this connection peculiar reverence.

Yonder stands the family horse. He is not yet of age, and will never live long enough to be his own master. He is but two or three years past "sweet sixteen," and still the knowing ones call him old. And there lies the family cow, quietly chewing her cud, with none to molest or make her afraid. According to the standard of us mortals, she is but a young miss yet, just entering her teens. But yet she is a great-grandmother, and of course, she, too, must be set down as aged. If she could only "haul in her horns," she might, like other females of a higher grade, disguise her real age; but those bony projections tell the unflattering tale. It is curious to contrast the progressive development of the mortal and the brute. The mere boy looks at the horse, who was born on the same day with him, and wonders that the beast should be growing old, while he has so many years left for growing young. And now the boy is rejoicing in the flush of early manhood—but how is it with the horse that was a sucking colt when he was a puling babe? Almost through with life's cares and labors, when he is but just entering on them! Poor old fellow, to have so short a lease of life! Yonder toddles a wee bit of a girl towards the barnyard gate, to peep at the new-born calf inside. Strange to say, that maternal heifer, so jealously nurturing her offspring, came into the world the same day with that little, wondering, innocent, held in its father's arms. And by-and-by the gleeful maiden will be frolicking about,

while her cotemporary of the yard stands demurely looking on, with joints too stiff almost to move. Thus whole generations of domestic animals rise and fall while one of ours is rising. And yet this brief life is all they have, whilst ours stretches on through endless ages!

But enough of sentiment, and now for the practical application.

What shall be done with the old horse and cow? Don't have anything to do with such creatures, say some, but contrive to transfer your live stock into other hands before it gets old. Suppose, however, you have a family horse that is giving you the best of his strength and endurance, but is all the while advancing in years. You cannot blame him for this—it is as much a law of nature to the beast as to his master. The fountain of perpetual youth is as much a myth to him as to you; and worse than this, he seems to leap at one bound from youth to age. He tries hard, when let loose, to leap back again. He will throw up his heels and curvet and play shy, but the old fellow makes clumsy work of his early coltish tricks. Clad in harness, his age will betray itself, in spite of patent leather and silver plating. Prick up ears and tail as he may, at starting in the crisp morning air, he will pretty soon be dragging his slow length along despite all your coaxing and lashing, till his head is turned towards home. All the fire left in him is not sufficient to "get up steam" more than to fulfil for his driver the apostolic injunction, "Let your moderation be known unto all men."

But he is of some use after all. Age, indeed, does not invariably hinder speed, and you will see, now and then, an experienced road-horse outstrip his younger brethren. This, however, is the exception. Aged, as well as large bodies, are apt to move slow. We, of this fast age, get out of patience with slow coaches, but when you really want to enjoy new and beautiful scenery, and chat leisurely by the way with your traveling companion, how convenient it is to be driving an old, steady-going nag! What a favorite, too, he is with all but fast women; and just the team to trust your wife and children with. Neither will he be balking and shying when put to serious farm-work, and frittering away his strength in needless starts and plunges, but plods patiently through the day, and evening sometimes, like a good and faithful servant. How fruitful, as well as useful, old age may be, if the animal in question be a mare. She not only serves her own generation but posterity besides, renewing her youth through a succession of colts.

Meanwhile the cow is growing old, and what shall be done with her? Hurry her up, say some, for slaughter before the beef gets any tougher. Ah, what a thankless lot is this of the cow, that her "milky way" should only have been leading to the butcher! No wonder her milk is sometimes streaked with blood, in anticipation. The writer confesses himself in a quandary over an aged cow. She still lives and eats, and returns from her udder a fair equivalent; and what her milk loses in quantity, with the lapse of years, it appears to gain in quality. Her owner, however, needs but one good cow, and that he is likely to have in the smart, plump looking heifer by her side. So the elder of the two is probably to be sacrificed, though she has no suspicion of it yet. And if nobody will buy her for the dairy, there is no alternative but for her to drop suddenly to rest, one of these days, in that sure haven for aged kine, the slaughter-house. Let me, however, recommend to the farmer who has plenty of fodder and stable room, to keep the valuable steed, or cow, that has grown old on his hands. And would it not be well for us all to show a little more reverence for our domestic animals that have unfortunately passed their prime? I have associated with the stable a term that probably belongs to the house; but the "old folks" have by this time discovered my motive. It was not to detract from the respect and affection that is ever their due, nor to abate one jot of the tender care they have a right to expect from their children and children's children. Only let not such regard begin and end with them. When you have done "pitying the sorrows of a poor old man," pay a visit to the barn, and see if there be not some venerable object there, also, for your pity and regard; and remember in that connection old age may not only be green, but also be made to blossom and bear fruit.

Feb., 1863. W. E. B.

For the New England Farmer.

HINTS ON BUILDING BARNS---No. 3.

The barn is the building next in importance to the house, and the same objects should be kept in view in its construction, viz., convenience and durability. The location should be on dry ground, and as near the house as possible, and not expose it to danger from fire. If possible, it should be on the same side of the highway as the house, which may be said of all other buildings, as they are more convenient to the house, and a dozen steps saved every day, makes a long journey in the course of a life-time.

The most approved plan of building a barn, is, with a basement and cellar; in short, no first-class barns are built now-a-days without them, and it is much the cheaper to build in that way, as the extra room gained, is worth double the extra cost. In building the basement walls, spare no pains to make them solid, for here is where the ruin of most barns commence. Not one of my readers but what can look around his neighborhood, and see more or less barns all out of shape, and some falling down, and all in consequence of imperfect foundations.

The same hint is applicable to this wall that was recommended for the house cellar, viz., to dig a trench under the wall, and a drain from that, and fill with pounded stone so that the cellar shall be dry. The size of the barn should be regulated by the size of the farm, and should be large enough to hold all the grain raised, and some of the hay. A large floor is indispensable for convenience in threshing, but should not be used for a carriage-house, as many farmers do, to their great disadvantage, and the abuse of their carriages and wagons. The stables, which ought to be in the basement, should be arranged so as to feed from the floor above, which will save a vast amount of labor in carrying hay and straw.

Good inch boards put on up and down and battened, are better than common siding, which is liable to split and get torn off, and is not as tight as the former way. It is contended by some, that siding looks better, but I disagree with them there, as it is a theory of mine, that the beauty of an object of that kind consists in its durability and

adaptation to the purpose for which it was constructed, rather than mere appearance. In any case, use good materials, and have the work well done, and you will probably have a barn as long as you live, provided no accident befalls it.

A necessary fixture to a barn is the cattle-yard, which should be on the south or east side, for two reasons, viz: it is warmer for the cattle, and the ice thaws out sooner in the spring, so that the manure can be drawn earlier. It should be as small as possible and accommodate the stock you wish to keep, as it gives you better control over the cattle, and you have the manure on less ground, making it more convenient getting it. The fence should be of boards, made tight, and sufficiently high to prevent the possibility of any animals jumping over. If it can be done without too great expense, water should be kept running in the yard, but if this is not practicable, a well should be dug. After the yard is laid out, and before the fence is built, take the plough and scraper and make some spot in the yard, wherever the most convenient, considerably lower than the rest of the yard, which must descend towards this spot. Into this reservoir may be thrown suds, muck, straw, weeds; and any refuse matter at hand, to absorb the liquid manure settling into it, and thus save a vast amount of valuable manure, which nine-tenths of farmers waste. Thousands, yea, tens of thousands of dollars are thrown away annually in this manner, which one day's work in most cases would have saved.

One-half of the barns are built on a knoll, and near a stream of water, the yard being left in a state of nature, thereby letting the best part of the manure run off into the stream. Now I approve of putting the barn on high and dry ground, and I do not care how near to the stream, for that is all the more convenient, and the higher the ground, the better the yard, but do not leave it in the shape of a cone, uuless you wish to ruin your farm. Do not have a pair of bars near the barn, or house, but supply their place by good, strong gates, by which yeu will save much time, and perhaps some vexation of spirit. An indispensable adjunct to the barn are eave troughs, with conductors attached, to carry the water down into the cistern, as a drain to carry it off. It is, also, a good plan to have a room, either in the basement or on the floor, for storing farm implements, such as ploughs, harrows, hay-racks, and all other tools when not in use. The better way is to have a building for that purpose, but as the young farmer cannot have all these things, he must make the best use of what he has, and it is far better to have such a room in the barn than none at all. Should there be sheds attached to the barn, they should be made to form part of the yard fence on the side most exposed to the cold winds, thus keeping the yard warmer. If sheep and cattle are both kept in the same yard, they should be separated by a fence across the yards, and sheep ought always to have a good warm shed to run under in winter.

In conclusion, I would say, keep the barn well painted, and if a board gets loose, or any thing out of place, repair it immediately, and your barn will have the appearance of a new barn for many years. AGRICULTURIST.

New York, Feb., 1862.

HOW COAL IS FORMED.

The land on which coal plants grew has passed away; no human eye will see their like again—no human eye saw them, no human hand touched a leaf of these gigantic trees and forms. No limner's art ever portrayed those dense forests, nor surveyor's pen mapped down the broad estates on which they rankly grew. But certainly as the rays of light tell us of burning metals in the sun, so will the segregation of the earthy particles into which their long and creeping roots penetrated the bedding of the grains of sand and clay which intimately covered them up, tell us the story of the ancient physical condition, under whose influence lifeless trunks, and leaves and boughs became converted into coal.

Low were those ancient lands, surrounded by marsh swamps, bounded by shallow estuaries, up which salt sea water gently rose and fell; one can scarcely speak of tide, so smoothly between the stems and undergrowth of water loving tree rushes, and through the tangled jungle it slugglsh-ly flowed. Into the muddy waters of estuary and lakes, and on the oozy ground around, the leaves fell year by year, as autumn chills unclothed the trees. As the trees too, in the roll of time, rotted at their bases by the watery medium in which they grew, toppled over, and became immersed in the boggy soil under a surface coating of ferns and humbler plants, mixed with mosses; the rank herbage ever growing, rotting and fermenting. Green and verdant at the top, dark, black, heated and distilling out from the decaying vegetable matter, globules of bitumen below, to mingle with and penetrate the half-rotted, closely-matted mass of leaves and fibres, and of porous wood. Thus was the coal-seam formed. It was not open to the day until it had dried into the turf, or rotted into soil. But it was covered up at a certain stage of its elaboration, and preserved for human use.

It may have completed in the earth the process of its conversion into coal, but it was originally the produce of the *debris* of a living vegetation buried under a covering of mud. The accumulation might have long been going on near the surface, new bitumen secreting below; going on for ages before the mass was buried in. Covered in at last, stratum after stratum of mud and sand are piled over it, the weight of the superincumbent materials presses down the spongy fibrous upper part of the future coal-seam into the bituminous lower portion, the semi-fluid bitumen is squeezed upwards among the compressed fibres, and forced into the pores of the wood, the thickness of the vegetable bed is reduced, and it becomes an almost solid mass of wood and vegetable fibre, impregnated with the bitumen distilled from itself. If it had parted with its gases and bitumen before it had been covered in, it might have become fossil heat. But coal, the produce would never have been. Briefly, then, such was the origin of coal. This view of the matter excludes at once the anthracites from any right to the term of coal. Next, to dispose of the lignites. Lignites may, or may not at some future time—ages to come—be converted into coal. They are not coal yet; they are still ligneous.

The wood structure is so well preserved in the brown coal of Switzerland and Germany, that in some places it is used for rafters, beams, and other building purposes. The stages of elaboration

are not yet complete, which are requisite for the production of coal. It is the babe, not the man. Anthracite has lost its bitumen. It is the corpse. It might have been coal once, it is less now. Shale is the path on which the corpse was laid. It may be saturated with its blood, but it is not the body.

For the New England Farmer.

RETROSPECTIVE NOTES.

WINTER MANAGEMENT OF SHEEP.—On page 45 of the February number of this journal, those interested in raising sheep and growing wool—and who is not at the present time?—will find an interesting and instructive quotation from an article by Mr. FAY, of Lynn, Mass., printed in the last Patent Office Report. So few, comparatively, of the readers of the *Farmer* are likely to see Mr. Fay's essay, that it appears as if the present quotation could not fail to have made hundreds of readers desire to have more of it in the same way—the only way in which the bulk of them are likely to obtain the benefit of the experience of so judicious and reliable an instructor.

So many are rushing into the business of wool-growing that mistakes must be made from ignorance, inexperience, and other like causes, from which disappointments and losses are almost certain to follow; and as from some special interest in the readers of the *New England Farmer*, we would fain rescue *them* from such blunders and disappointments, we have been induced to call their attention to the article under notice, and for their prospective benefit, to make the suggestions somewhat reluctantly ventured.

As there is nothing stated in the quotation from Mr. Fay's essay, which would be likely to give the readers thereof any idea of one great source of danger in the wintering of sheep, we would here make a remark which may save some sicknesses and deaths in their flocks. The danger just referred to is that of the occurrence of sickness and death from what is usually designated "the stretches." From this disease we lost almost all the sheep that we did lose during the first years of our keeping sheep. Our losses and the rarity of a recovery after a sheep was once attacked with this disease, led us to investigate its *causes*, and to discover, if possible, efficient modes of *prevention*. This we think we have accomplished pretty thoroughly, if not perfectly. Having made ourself very sure that the disease is caused by the want of proper action of the bowels, and that this is caused by the exclusive, or almost exclusive use of dry feed, it was but a short step to reach the conclusion that the most probably efficient method of prevention would be one which would counteract costiveness, and bring the bowels into a condition somewhat approaching to that which is usual when sheep have the succulent feed of spring and summer. Accordingly roots were thereafter grown in sufficient quantity to give all our sheep a full feed at noon, about twice or thrice a week, when not prevented by excessively cold weather. Troughs were also provided in which salt was always kept within reach of the sheep, and more pains were taken to have water made easily accessible. The result of the adoption of this method of prevention has been a complete disappearance of this once formidable disease, and an escape from the losses previously caused by it. We have occasionally mixed ashes and sulphur with the salt, and have also fed bran and oil cake as adjuvants to the relaxing quality of the roots, but we ascribe the disappearance of "the stretches" mainly to the use of roots, and are confirmed in this opinion by a piece of information lately received, namely: that this disease is nearly entirely unknown in England, where, as is generally known, sheep are wintered very largely on turnips.

Those who are not provided with roots must, for the present, devise some substitute which will act in a similar relaxing way, if they would keep their sheep healthy and out of danger from exclusively dry feed, and the consequences thereof; and, in the future, raise enough of turnips, bagas, or beets to give every flock of twenty-five to thirty sheep, a bushel of them, cut up in thinnish slices, two or three times a week, or a less quantity daily. As, however, there are days, every now and then, too cold for feeding roots, even under shelter, we have found it most convenient to feed them on mild days, and some grain, generally unthrashed oats, on the colder days. Those who neglect to feed roots to their sheep are running on a different track from that of the best sheep-breeders, and will come out only second best.

MORE ANON.

For the New England Farmer.

RAISING MUSHROOMS.

To be successful in raising mushrooms at this season of the year, a warm, dry cellar is necessary.

1. The mushroom spawn, the best kind and purest, can be obtained at the agricultural seed stores, in the shape of bricks.

2. A wood frame, four feet wide, and not less than four feet in length, will do, but you may go to any length you please, said frame to be thirteen inches high.

3. Fresh horse manure from the stable, where the horses are fed with grain, without any litter amongst it, is the best for the bed; the manure must not be frozen.

4. *Making the bed.*—The manure must be well broken up and beat down solid in the frame, within an inch of the top; that is, the manure will be twelve inches deep; about the centre of the bed push down a pointed stick to the bottom of the bed, and from time to time take out the stick, and feel of it; the whole that goes into the bed; you will, by so doing, ascertain how the heat progresses. When the rank heat begins to subside, the bed will soon be ready for the spawn; as soon as the heat is sweet and moderate, spawn the bed at once, as follows: make your rows six inches apart and two inches deep, the spawn being broken up into lumps the size of a walnut; plant the spawn six inches apart in the row, cover the spawn and smooth the bed evenly; then half an inch of fine light earth finishes the work.

A thin covering of clean straw on the bed will preserve the heat. Finally, if the work is well done, and the spawn is good, there is no fear of not having mushrooms. JAMES M. RUSSELL.

Nelson, N. H., Feb., 1863.

THE CULTURE OF FLAX.—English papers are agitating the subject of an increased attention to the culture of flax as an offset to the scarcity of cotton. Machinery has been perfected for its manufacture both here and in Europe, and a permanent prosperity will no doubt result.

SAND.

This earth derives its name from *silex*. It is one of the most abundant of the original earths, and distinguished by the circumstance of its forming "vitreous earth," or glass, when combined with alkalies. Quartz is almost entirely composed of silex. The old chemists supposed it to be the primitive earth, and it was hence denominated the "elementary earth," from which all the other varieties of soil proceeded. It exists in nature much more abundantly than any of the other earths, and is a constituent of all hard stones which emit sparks when struck with a steel; "in the enormous mountain masses of granite, porphyry and gneiss," as of the boundless accumulations of sand in deserts and plains. In all of these silex is a preponderating ingredient. Very few stones are entirely destitute of silica, and it is found in the ash of almost every plant after burning, which leaves only the mineral ingredients, the other constituents being destroyed by combustion. Grasses contain it in very liberal and even large proportions sometimes, as do also the straw of wheat, rye, oats and other cereals—the stalks of the corn plant, &c. It has also been detected in the skin of animals. It is, however, but rarely found in a state of absolute purity. Even in quartz, which is mostly composed of it, we detect both alumina and oxide of iron. It probably does not exist in nature in a state of perfect dryness from extraneous matters, and it is only by artificial processes that it can be exhibited in its purity. In the laboratory of the chemist it is to be seen in the form of a "fine, white powder, adhering a little to the fingers, and exhibiting a kind of gritty roughness when pressed or rubbed. It is totally devoid of both taste and smell. It undergoes no changes when subjected to the action of fire, and neither fuses nor volatilizes, whatever degree of heat may be applied."

It has no affinity for water, and cannot be dissolved even in the minutest portion, unless through the agency of an intermediate body, but when mixed with water, it immediately precipitates, and no part of it is left in solution. No acid, except the fluoric, is capable of acting upon, or dissolving it. It may be boiled in sulphuric, nitric or muriatic acid, without even the minutest portion of it being taken up. With fluoric acid it forms a gaseous compound, and when the acid is evaporated, goes with it. It does not imbibe water with avidity, and this fact shows why sandy soils, or those which contain a preponderating quantity of silex, are generally so dry and so incapable of sustaining vegetable life, except when filled with humus, or some similar substance which possesses absorbent and retentive powers. All the fixed alkalies, however, possess the power of readily uniting with and dissolving it; hence the utility of alkalescent applications on sandy lands, and the powerful agency they exert in promoting the development of the straw of wheat, oats and other grain crops, to the perfection of which silex is essential. Silex, or silica, is an ingredient of felspar and mica. Felspar, by Von Thaer's tables, is composed of

	Parts.
Silica	62.82
Alumina	17.02
Lime	3.00
Oxide of iron	1.00
Potash	13.00
Loss	3.16
Total	100.00

In common mica we find

	Parts.
Silica	47.00
Alumina	20.00
Oxide of iron	15.55
Oxide of magnesia	1.70
Potash	14.55
Loss	1.20
Total	100.00

Sand is of three varieties, as classified by geologists, viz., river sand, pearl sand and moving sand. The first presents a fine, clear, colorless grain; the second is composed of larger grains, which are spherical shaped and semi-transparent. The position of this variety is generally subterranean, but it is often washed up by running water. The third is composed of grains of divers size and shape, and not unfrequently a mixture of calcareous matter with it.

Von Thaer, in his "Principles of Agriculture," in speaking of this earth, says:

"Although the grains of sand are, for the most part, composed of silica, they always contain small portions of alumina and oxide of iron. Sand has as little attraction for water as pure silica, and thence, as well as its not having the attraction of cohesion for *humus*, arises the sterility that attends soils composed in too large proportions of this earth. When the sand is united into hard masses by adhesive matter, such as clay or lime, or by mechanical compression, it is called '*sand stone*.' There are various kinds of this substance, all varying from each other in fineness and density. They are taken out of the ground in a soft state, and cut for building purposes; to make door jambs and window sills; also, mill stones and wheels for grinding and polishing tools, are made of them."

The sand stone was formerly scarce. It is now procured from Saxony, and is an important article of commerce.

Sandy lands should, if possible, when intended for cultivation, be dressed with clay. Some of the best and most productive soils in New England owe their extreme fertility to this process, and are thereby fitted for growing every description of vegetable with greater success and certainty as to maturation of crop, than many of our best soils.

The quantity of clay which may be necessary thoroughly to ameliorate sandy lands, will, of

course, be decided by their geological character. The poorest lands require a large amount, while those which are less sterile may be very greatly improved by a small amount. Capital can in no way be more lucratively invested than in redeeming lands by this process, when clay can be conveniently obtained.

To Correspondents.—Thanks to our reliable, intelligent and obliging friends, for numerous excellent contributions to the columns of the *Farmer*. As is usually the case, the winter is our *harvest season*, for this important crop. We are not able to publish as fast as received, but shall select those that are the most seasonable, and publish first; that is, inquiries and replies to inquiries, and articles that especially relate to spring work, such as gardening, sowing, planting fields, transplanting trees, &c., &c. Others that are received are just as applicable at one time as another, as they may discuss principles, or may best treat of summer or autumnal work.

"Queryman" will please observe this, and feel assured that his articles are always acceptable. We shall be glad of the "reports" to which he refers, for publication by-and-by, when correspondents are specially employed in out-door labors.

Massachusetts Horticultural Society.—A meeting of this Society was holden on the 3d of January, at which the Hon. Joseph Breck retired from the President's chair, and introduced C. M. Hovey, Esq., as his successor. On assuming the chair, Mr. Hovey made an excellent speech, speaking of the former prosperity and high character of the Society, and then foreshadowed what ought to be its future efforts and purposes. His remarks were singularly judicious and practical, and will undoubtedly have an influence upon the future operations of this good old Society.

The Agricultural Interest.—It is asserted by those the most competent to judge of the matter, that the agricultural interest of the country embraces *ninety per cent. of the entire wealth of the country.*

The Best Apples.—At a late meeting of the Worcester Horticultural Society, the subject discussed was the best kind of apples for general cultivation, and after much and valuable discussion, the members agreed upon the following twelve kinds: Mother, Hubbardston Nonsuch, Rhode Island Greening, Baldwin, Roxbury Russet, Tolman's Sweeting, Red Astrachan, Duchess of Oldenburg, Williams Early, Early Bough, Porter and Gravenstein.

☞ The 12,000 acres of land to which Rhode Island is entitled under the law for the establishment of agricultural colleges has been located in Kansas.

For the New England Farmer.

THE MILK BUSINESS.

A meeting of the farmers who are interested in the milk business was held on the evening of February 9, in the Town Hall, in Wayland, to see what action can be taken in order to *sell milk by sealed measure*, or act in any way in relation to the milk business. The meeting was organized by the choice of John N. Sherman, Esq., as Chairman, and H. A. Shorey, Secretary.

Addresses were made by Messrs. Abel Gleason, E. W. Giles, Asahel Sherman, Horace Hurd, Geo. E. Sherman, Geo. Shorey, and Mr. Goddard, of Lincoln. The speakers all agreed that milk should be sold by no other measure than by *cans that are sealed*, so that farmers may know how much milk they are selling for a can, and to sell legally, so that they may be enabled to get their pay. Farmers should be united as well as the milkmen. A committee of five persons, consisting of Messrs. Abel Gleason, E. W. Giles, A. Sherman, J. B. Sherman and Mr. Goddard, of Lincoln, was chosen to confer with the people of other towns, and ask them to unite with us. The meeting then adjourned for two weeks, when the committee are to report.

Wayland, Feb. 10, 1863. H. A. S.

For the New England Farmer.

SUCCESS---BOOK FARMING---MANURES.

Few men ever succeed in business without a thorough knowledge, giving to that business their close attention, snd devoting to it the whole energy of their nature, "In the course of human events," these are the requisites of success. I would not say a man *cannot* succeed who does not do this, but I will say, this is not often the case.

Now, what I wish to impress upon the reader is —that farming, as I understand it, is a business, something more than simply an occupation—it is an occupation and a business, which calls into action the whole man, and all the faculties of his mind, and if he would succeed and be one of the go-ahead, progressive farmers of the day, such as the times demand, he must make diligent use of all these. I am disgusted by the "twaddle" which is often expressed, that it is not necessary that the farmer should be a learned man; no business which man follows requires more. I know, very well, an ignorant man *may* succeed by farming, in maintaining himself and family—more than this, even—and so do some very ignorant doctors, lawyers, &c., but this by no means proves that they should not be learned, even in book knowledge, as skilled in human nature; but, on the contrary, it would be no more than a fair question to ask whether they would not have been far more successful by being "learned." It is fair to suppose they would have been, besides the great amount of pleasure they would have enjoyed by a better understanding of the "*modus operandi*" of nature, an item of no small consideration in making up the aggregate of human enjoyment in this life.

Manure is acknowledged to be the corner-stone of successful farming. Without it in some form, there can be no success. We are told that this truth will not apply to the West—of this I cannot say—but in New England and the Middle States, it is a fact from which there is no escape. Now, how many farmers, suppose ye, Mr. Editor, understand manure, its manufacture, composting and

application for the production of particular crops? and yet, it is a subject which can be learned, and its application for the accomplishment of a particular purpose understood, almost with as much certainty as the farmer's good wife takes certain ingredients, and by mixing them in a particular way, makes the soap which cleanses the dirty shirt of his hired man. Here, then, is a vast and important field, open for study and investigation, as yet but very imperfectly understood:—The making of manure, its composting, and its application to the production of particular crops. How can this be done, even if the knowledge is possessed by the farmer, if he is deficient in the further knowledge of his soil and its wants. To act understandingly, the two must go together. The truth of the matter is, the business of farming requires a larger range of study than any other human pursuit, and as science progresses, this great truth will be more and more admitted as a fact by all those engaged in it, if they expect to be successful and pursue the business for profit. Remember, I do not say the farmer may not succeed without this knowledge; this is not the idea. I believe many of them are beginning to comprehend this matter in its true light, and book farming is becoming a necessary and recognized fact. See Proverbs 15: 14. N. Q. T.

King Oak Hill, January, 1863.

EXTRACTS AND REPLIES.

TO KILL VERMIN ON ANIMALS.

I noticed in the *Farmer* of Jan. 3d an inquiry for the surest and safest way to kill lice on animals. I have found that salt is a sure exterminator. Put a pint of salt to a gallon of warm water; add a small quantity of soap; stir till well mixed before using it. The application of the above will be a benefit to the animals besides removing the lice.

JAMES M. RICHARDSON.

Pembroke, N. H., Feb., 1863.

A FINE PIG.

On the 6th of June last, I bought a pig 12 weeks old, which weighed 80 lbs.; kept him until Dec. 22d, (199 days) when he was killed and weighed, dressed, 282 lbs., which, taken as three-quarters of his live weight at that time, would make the live weight 376 lbs; just 1¼ lbs. per day for the whole time I kept him. Is not that a fair increase?

REMARKS.—Yes. And that will be pork "fit for the pot," and never hurt any one, unless he eats too much of it.

HAULING OUT MANURE IN WINTER—PILLING UP ABOUT TREES—FEEDING DRY MEAL TO HORSES.

I see in your notes on J. P.'s letter, page fifty-two, you advocate very strongly the drawing out manure in the fall and ploughing it in. Will it do as well, or nearly so, to draw it out in the winter when the ground is frozen, and spread and plough it in, in the spring. I have reference to level land where it will not wash off.

You speak of improving trees by filling up around them. I will give an instance. My father-in-law had several young trees on the north side of his house, but they did not amount to much. Having occasion to fill up a part of the yard about two feet, he was surprised to find the trees on that part of the yard about two weeks earlier the next season, and the fruit much more plentiful and very much improved in quality. I was glad to see the piece headed "Newspaper Controversy," on page sixty-four, and hope that will stop the discussion about "Agriculture in Common Schools."

Are there decided objections to feeding dry meal to horses in winter with dry hay?

Can you recommend the Chester county pigs for general keeping?

For the benefit of "New Subscriber" I will say I have pure Black Spanish fowls? A. J. ALDRICH.

North Blackstone, Mass., Feb. 13, 1863.

REMARKS.—We can see no serious objection to hauling out manure in the winter as you suggest, if the ground is such as can be early plowed. Manure loses little or nothing so long as no fermentation takes place, and the probability is that on such land as you describe, the manure could be ploughed under before that condition was reached.

If horses are allowed plenty of time to eat, we can see no reason why dry meal should not as well be fed in that way as in any other. At first, they might eat it too hurriedly, but after becoming accustomed to it they would probably feed deliberately.

The Chester County pigs are highly commended by some, and thought little of by others. We have never tested them.

AMERICAN HERD BOOK.

Will you inform me who publishes the "American Herd Book," and when the next volume will be issued? H. S.

Londonderry, Vt., 1863.

REMARKS.—Vols. I. and II. of the "Devon Herd Book," American edition, edited by Sanford Howard, were published by James D. Torrey, New York, in 1855, and can be had of any dealer in agricultural books. We cannot say when the next volume will be issued.

SHEEP EATING WOOL.

I have, among my flock, three sheep that prefer wool instead of hay for their food; they will leave the best English hay, and commence eating wool from the other sheep; they have made such work among my sheep that I have shut them up alone. Will you or some of your correspondents inform me of the cause, and what will prevent them from eating wool? JOHN M. SALLEY.

Embden, Me., Feb. 15, 1863.

AQUEDUCT OF PINE LOGS.

In reply to your correspondent about the cost and durability of our aqueduct, I will state a fact which he can use or not as he pleases. The Salem and Danvers aqueduct is laid with logs of pine wood, with a bore of about two inches in diameter. It extends about three miles, and supplies five hundred or more families. The water is taken from a fountain artificially created 54 feet above tide water, in a springy soil, and is of the purest quality. It has been in existence forty years or more, and has been relaid through the whole length once, and repaired from time to time as necessity demands. It has been a great convenience to the public, and a decidedly profitable investment to the proprietors. The stock is now worth three times what it cost. Perhaps a more permanent material would have needed less repair, but none could have done a better service. P.

February, 1863.

GOOD BROWN BREAD.

Some time in the fore part of the season I noticed in the *Farmer*, a recipe for making brown bread by steaming, and as we liked it very much, I wish to pay, as far as I can, for the information. We think we have improved on that recipe. Ours is: Take 1 pint each of rye, corn and wheat flour; ¼ teacup molasses. Wet soft with sour milk, or if you do not have plenty of milk, it is about as good wet with warm water, with 3 tablespoonfuls of vinegar to 1 pint of water, and soda to sweeten either the milk or soured water. Steam three hours, without taking the cover off, as that will cause it to fall. FANNIE.

For the New England Farmer.

THE HOLBROOK PLOUGH.

MR. EDITOR:—Have you used this plough with the double mould board? It has been claimed that it is an improvement upon the Michigan plough, inasmuch as the forward board will lay the sod grass side down, flat in the trench, while the Michigan lays it rather in a roll than flat.

There has been an objection brought against the Holbrook plough, as being very hard to hold. How is this? Does this objection apply to the double plough?

There seems to be but little said about this plough of late, nor have I seen it mentioned in the lists of ploughs entered for trial. Will its merits not warrant a trial with others competing for the meed of doing the best work and being the best plough, or is it withheld at present for some improvements upon it?

These inquiries are made to draw out important information to all who have not seen said plough used, and are in want of the best plough to aid in renovating their worn-out fields; and in my own case, to learn if it would not be well adapted to turning under couch grass *(Triticum repens,)* so effectually as to smother it at least one year, so that the land would be respectable for hoed crops, in addition to deep ploughing and thorough pulverising the soil to improve its productiveness, where it is free of stones, or in short alluvial bottoms.

The idea of having a plough so constructed as to be a plough of all work, seems to be a good and feasible one, saving expense to the farmer and being more convenient than having one for sod, one for stubble, one for cross ploughing, and so on to half a dozen more or less.

Elm Tree Farm, Me. O. W. TRUE.

REMARKS. — We have used the Holbrook plough, or, as it is usually called, *The Universal Plough*, and were greatly pleased with its performance. It did excellent work wherever we saw it in use, and we have heard no objection to it on account of its being hard to hold.

For the New England Farmer.

THE SEASON---SALT MARSHES---SIDE-HILL PLOUGH.

In open winters like the present, there is much difficulty in getting salt hay off the marshes. Most farmers need the hay, and expect to get it the last of December or first of January, but up to this week only a small part has been got off the Hampton Falls marshes. It is drawn to the upland mostly on sleds, and then loaded on carts and wagons. Sometimes sleds are put underneath the cart and the hay drawn off in that way, But it makes a deal of work, and the busy scenes witnessed at the places of reloading are the only redeeming features in the case. These marshes are extensive and valuable. Thirty and forty dollars, sometimes more perhaps, is paid per acre. Mr. W. A. Hopkins, an Englishman, has been ditching on many pieces in these marshes within the last ten years to their great improvement, making them harder, and increasing the burden a quarter or third part. The plain marshes, or those covered by high tides only, naturally produce from one to two tons per acre. The low flats, sometimes called, which are covered with water at every tide, bear a tall grass called thatch, and are much more productive. Three to five tons, and perhaps, sometimes more, are cut per acre. Mr. Daniel Merrill, of Salisbury, Mass., it is said has five acres in one piece which cut twenty-five tons, and makes good fodder for cattle.

I have used the past three seasons, a side-hill plough. I find no trouble in turning the sod on level land, or even in turning it up hill. Think there is much saved in travel, beside the dead furrows and the ridges. When it is practicable, I can plough much faster by turning the sod down hill. I think the land-side of my plough too short and narrow; have never seen anything different, though I should like to very much, as, in my opinion, it can and will be made the most desirable plough. I use the long handled shovel and do not mean to be frightened out of it, by any cry of "Paddy," or any thing else. JOS. W. BROWN.

Kensington, Feb., 1863.

For the New England Farmer.

LOW PRICE OF MILK.

MR. EDITOR:—Like everything else, the cost of hay, meal, and other articles of cattle food, are from fifty to one hundred per cent. higher than they were a year ago. Butter and cheese have risen in almost an equal ratio, but milk remains the same, and those who furnish it for the market are receiving an entirely inadequate price, and doing a losing business. How can this be prevented? Let the farmers at once determine to make butter and cheese, if they cannot receive a proper price for their milk. Let there be in every town certain dairies where milk will be taken and turned into butter at an agreed price. Let the farmers' clubs interest themselves in this matter, and the thing is done.

Those competent to judge, say, that, were it not for the vast amount of adulteration, the supply of milk is entirely inadequate to the wants of the metropolis.

If farmers should agree together to add a cent a quart to the old prices, when they renew their contracts with the railroad men in the spring, they could, and ought to obtain it, and if they should not, it is better to turn their milk into butter, than to sell it at the present prices. The milkmen would soon be brought to their terms.

A MIDDLESEX FARMER.

For the New England Farmer.

A CEMENT AQUEDUCT.

MR. EDITOR:—It affords me pleasure to reply to the communication in your paper of last week from Mr. Stanford, of Irasburg, for, by so doing, I shall do him a favor, and bring to the notice of your readers a really good thing in the shape of an aqueduct.

I have a number of tenements which were supplied with water, until last September, by a one inch lead pipe of more than two hundred rods in length, under a pressure of water of about eighty feet. The pressure was so great as frequently to burst the pipe, in consequence of which I was induced to try the cement aqueduct made by Mr. J. D. Strong, of this town, (Hartford, Vt,) under a patent of Mr. Livermore, of Rutland. I contracted with Mr. Strong to dig up my lead pipe,

and put down a one and a quarter inch cement pipe and warrant it good and sufficient.

The water has now been running through it nearly five months, and it has not yet burst, although it did break through some two or three imperfect places which Mr. Strong promptly repaired. (It was his first job.)

The result is, I have full confidence in the aqueduct, and have no doubt in recommending it to the public as a good thing. Mr. Strong is a highly respectable citizen, and what he says or agrees to do, may be relied upon.

As to the cost, I can only say that I have sold the pipe taken up for old lead, and made a profit of nearly one hundred dollars, and have got a better aqueduct than before. N. B. SAFFORD.

White River Junction, Vt., Feb. 14, 1863.

For the New England Farmer.

ON MAKING AQUEDUCTS.

In the *Farmer* of Feb. 14, 1863, information is asked for about laying down an aqueduct. "Can I lay down cement?" is the inquiry. Yes, you can; it is safe, costs about 50 cents per rod, where there is no pressure. Where there is 50 to 75 feet, $1,25, and it can be laid for all prices between the two, according to the pressure, on hard pan soil. If the hole is two-inch it will cost some more. I have laid one-inch hole, but thought that S. Stanford, of Irasburgh, would want two-inch hole to supply twenty-five families. I have laid it to one village of eight families; I did not have any reservoir; I guaged the water at every house, and it works very well. The pressure was 60 feet or more. There is no trouble if cement is good. I am now making cement tubes to set in houses; they hold fifteen or eighteen pailfuls; they are made of cement and sand and will never rot out; they are made round, like a barrel, and the outside straight and smooth, so that they can be painted any color. JOSIAH CONVERSE.

Bakersfield, Vt., Feb., 1863.

CARE OF BOOTS.—I have had three pairs of boots for the last six years, and I think I shall not require any more for the next six to come. The reason is, that I treat them in the following manner: I put a pound each of tallow and resin in a pot on the fire; when melted and mixed, I warm the boots and apply it hot with a painter's brush, until neither the sole nor the upper will soak any more. If it is desired that the boots should immediately take a polish, dissolve an ounce of wax in a teaspoonful of lampblack. A day or two after the boots have been treated with the tallow and resin, rub over them this wax and turpentine, but not before the fire. Thus the exterior will have a coat of wax alone, and shine like a mirror. Tallow or grease becomes rancid, and rots the stitching and leather; but the resin gives it an antiseptic quality, which preserves the whole. Boots and shoes should be so large as to admit of wearing cork soles. Cork is sc bad a conductur of heat, that with it in the boots, the feet are always warm on the coldest stone floor.—*Mechanical Magazine.*

ACCORDING to a recent article in a magazine, nearly one-third of the women of England never marry, and three millions of females are thrown upon their own exertions for support.

DWARF PEARS.

Wm. Bacon, of Richmond, Mass., one of our soundest writers on horticultural subjects, thus speaks of his experience with dwarf pears, in the last *Horticulturist*:

It is now ten years since we commenced the culture of the pear as a dwarf on the quince. At that time much was said to discourage the idea of success in the business, and since then there has not probably a year passed, but that this method of fruit growing has been eulogized by its friends, and anathematized by its enemies.

We have patiently heard and read the arguments in the case on both sides of the question, all along during those ten years, and, like a Dutch justice of olden time, who, as the story runs, in a certain trial gave "both sides the case," we suppose both may be right in their experience, (we do not say practice.) Yet, while the aforesaid justice concluded the constable should pay the cost, we fall back on our individual experience, and say that, with us, the trees have paid all costs, including expense of themselves, land rent, preparation of soil, after culture; indeed all the care bestowed upon them a hundred fold, and promise, if we do fairly by them, nothing more, to continue their remnnerative labors for years to come.

He states, in the same article, that he had found them quite as hardy as the standard pear, although he had met with some losses which his more matured experience would prevent in future. He does not regard dwarf pears as either a failure or a humbug.

MAINE DAIRIES.—Secretary Goodale, in his last report, gives special consideration to the dairies of Maine. He informs us that we manufacture enough butter for home consumption, though not always of the best quality; but in the matter of cheese we are sadly at fault. Indeed, we import two millions of pounds, or a thousand tons, annually, costing $200,000 at 10 cents per pound.

After a thorough investigation of the subject the Secretary declares that our pastures are as good as other States possess, our cows as good, or may be made as good, but we fail in our knowledge and practice of the art of making cheese. If we will only, as we must, improve ourselves in this art, at the same time improving our stock of cows, we may, if we will, manufacture all the cheese we consume and save the $200,000. By all means let us stop every leak. Let not Maine be drained of her wealth for the enriching of her sister States.—*Portland Advertiser.*

THE Ost Deutsche *Post* mentions a strange custom which prevails in Northern Bohemia. Every betrothed bride, however rich she may be, is obliged to go and beg in the neighboring villages, for the feathers necessary to make her bed. She goes on those peregrinations, which sometimes last several days, in full dress and accompanied by a poor woman. Every one gives her a friendly reception, and she always carries back an ample provision of feathers.

COL. ISAAC KING, of Palmer, Mass., realized last year $475 from the wool and lambs of eighty ewes.

LEGISLATIVE AGRICULTURAL MEETING.

The sixth legislative agricultural meeting was held Tuesday evening, Feb. 24th. The subject for discussion was "Fruits and Fruit Culture." We are indebted to the *Advertiser* for the following report:

Col. WILDER presided and opened the discussion. Fruit he said is an article of daily consumption; an eminent physician had remarked that health can scarcely be preserved without it. The failure of a crop, as in 1861, is a calamity. The crop of fruits the past year was unparalleled in our history. He rejoiced that fruit the past season has been within the reach of the poorest families. Five towns near Boston furnished 20,000 bushels of pears for the city market, produced by trees planted within 20 years. The orchard product according to the last census showed 50 per cent. greater increase than any other from crops except the grape. The increase of the vine crop was 740 per cent. There are more than 100 varieties of American apples and about 60 varieties of American pears in cultivation. The Flemish Beauty and the Buffum pears succeeded in 27 of the States, as do the Harvest apple, Astrachan and Sweet Bough. He spoke of the advantages of planting evergreen trees for the protection of orchards, and the importance of draining grounds for fruit trees, to the depth of three feet, and working the tilth of the soil to the depth of eighteen inches. He believed ground had been tilled too deep, especially for grapes. The best way of getting good, hardy varieties is to raise fruit from seedlings. Plant none but good seeds, reference being had to hardiness of habits, as well as productiveness. In regard to pruning, he would do it early in the spring before the sap begins to move: also in midsummer, but then it should be skilfully done; should be done when the trees are small, and a jack-knife should be the instrument used. Pruning is often done with an axe and saw; the ignorant man pruning irrespective of the bearing shoots. He spoke of the importance of thinning fruits. This done, and fruit trees will bear every year. Overbearing is the cause of the alternation in bearing, or of a tree's bearing every other year. The vital powers of trees are overdone as soil is exhausted by overcropping. He spoke of the importance of sorting apples for market; also of picking apples that ripen first in order to give the others a chance to mature.

Mr. WILDER mentioned twelve varieties of the pear, agreed upon by the Farmers' Club of this city. The first six are the Bartlett, Louise bonne de Jersey, Urbaniste, Beurre d'Anjou, Vicar of Winkfield and Merriam. The second six are the Seckel, Onondaga, Sheldon, Beurre Bosc, Lawrence, Doyenne Boussouck. Mr. Wilder sold his Beurre d'Anjou pears for $3 a bushel the past season, when Bartletts sold for $1 a bushel.

JOHN BROOKS, of Princeton, spoke of the importance of draining orchard land. He had increased both quantity and quality of apples by drainage, which also served to lengthen the season.

Mr. FLINT spoke of New England apples as superior to what he saw abroad. On the Continent, fruits were very plenty the past season, as here. He spoke of grapes as being produced in abundance. The best grapes he tasted were in Hungary. He spoke of 30 varieties produced there. He saw nothing of the wart or black-knot in Germany. He spoke of the vine disease, and the suffering caused by the cutting off of the grape crop.

Col. WILDER said, in reply to an inquiry whether the smaller fruits, as the currant, can be grown with the apple, they could, stating that Mr. Clapp, of Dorchester, realized $1200 per acre from his currant crop among his apple trees. He manured thoroughly.

Mr. TOWER, of Lanesboro', said much attention is given to fruit culture in his town. One nurseryman recommends to set trees 16 feet apart; another 25 feet apart. He grew roots among his trees. In eleven years his Greening trees have grown to 24 inches in circumference, the best growers he has; they bear well; the Baldwin is the earliest bearer. He sets out about 10 plum trees every year, and when the knot shows itself he cuts it off, no matter when it appears. He has plums plenty.

Mr. CHASE, of Haverhill, spoke of the importance of the grape culture, indorsing Rogers' hybrids, as also did Col. Wilder.

The seventh meeting was held on Tuesday evening, March 3d, Mr. WARREN, of Andover, presiding. We are again indebted to the *Advertiser* report:

The subject of discussion was "Manures and their Applications." Mr. Warren did not believe in applying green manures to the soil. He composted his manure and had better results. This was his experience.

Mr. HUBBARD, of Sunderland, did not agree with the chair in the application of manure. Experience and observation taught him the reverse of what the chair stated. In compost manures, more, he said, is applied per acre, than when uncomposted. Labor is high and it requires much to compost it. He spoke of superphosphates as being too uncertain for farmers to use. He recommended turning in clover, as a fertilizer, as a cheap way of enriching soil.

Mr. CHASE, of Haverhill, did not believe in sand as a fertilizer. He mentioned a farmer that had a farm of 39 acres on which, a few years ago he cut 10 tons of hay; it now produces 100 tons. Muck, he deemed a good fertilizer. One cord of manure to two cords of muck, makes a good manure, equal to 3 cords of manure. He recommended the use of ashes.

JOHN BROOKS, of Princeton, deemed the making of manures more important than the applying of them. He said farmers lose from one-half to two-thirds of their manures. Farmers should try to save their manures, for barnyard manures are the best fertilizers. He spoke favorably of sand as a fertilizer. He gave up composting some years ago. It costs too much. Manure does not go down in the soil. Sand is not an absorbent.

Mr. MOSELY, of Springfield, said that he is prepared to say that sand is a fertilizer. Sand is an absorbent and is used in the stable as an absorbent. Solid cow manure is a poor manure he had been told. Sand holds ammonia better than muck, as proved by experiment. The fineness of manure is an important quality. He had muck

in abundance, but preferred sand in the stable. There are so many theories about manures that he did not think much is known about its application. He recommended Mr. Chase, of Haverhill, to try sand. He recommended the use of salt in growing mangel wurtzels. Plaster is good for some lands. He did not agree that a crop could be doubled by putting a little compost in the hill.

Mr. Hubbard, of Brimfield, thought that benefits would be derived from the differences of opinion expressed here. He deemed plaster as valuable as guano. Plaster, 200 lbs. per acre, greatly improves pasture land. Some lands are not benefited by it. He recommended muck as a fertilizer. The use of sand was indorsed by Mr. Hubbard.

Mr. Hubbard, of Sunderland, spoke of a farmer that said he got a bushel of corn from the application of a bushel of ashes.

Dr. Loring, of Salem, indorsed barnyard manure, saying it is the basis of all manures. Manure for root crops must be decomposed. He had abandoned muck and preferred sand to it.

Mr. Fearing, of Boston, who farms in Hingham, indorsed sand. Plaster and lime is of no value on land. He deemed rockweed very valuable. Kelp is valuable but less so than rockweed. Commercial manures he did not like. Bone manure he recommended as a fertilizer for pasture land and for growing roots. Salt muck he did not like,—deemed it detrimental to the soil. He would ditch salt meadows two feet deep and 30 feet apart. He deemed barnyard manure the best and cheapest of all fertilizers. Bone manure, night soil and compost were tried for corn, and the first kind did best. He grew corn for 50 cents a bushel.

The eighth meeting of this series took place at the State House, Monday, March 9th. The Rev. Dr. Haven, editor of *Zion's Herald*, and an honorable member of the State Senate, presided, and acknowledged his indebtedness to farmers and farming for what he is physically; but for his early exposure to the furrow and the air of rural life, he said he should hardly have been raised.

Dr. George B. Emerson, the talented author of "*The Trees and Shrubs of Massachusetts*,"—in itself a monument to our country,—the profound scholar and finished gentleman, introduced the discussion by inquiring, "*What shall be done with the appropriation made by Congress for Agricultural Education?* He hoped an institution could be established and so organized as to do the greatest good to the greatest number. He would not have anything taught in such a college that can be taught elsewhere. He thought a professor of forest trees would be desirable; also one on fish culture, entomology, tree culture, gardening, &c. He gave reasons as he proceeded why these professorships would be important and would result in decided advantages to the Commonwealth.

Dr. Loring, of Salem, said he could add nothing to the elaborate plan presented by Mr. Emerson. There are 30,100 farms in the State, not one of which is carried on in the most economical manner. He had never heard of a graduate of one of the English agricultural colleges taking a premium for short horns, or anything else. He wanted a man who could tell us how to improve our soil; who could tell the Secretary of the Board of Agriculture, even, what to do with a piece of hopeless pasture land he has in Byfield.

Mr. Brown, of the *New England Farmer*, said he was not opposed to the establishment of colleges, professorships, or any institutions of learning that were useful to the people. He read the act of Congress, in relation to agricultural colleges, with care, soon after its passage, and he felt obliged to say that it did not strike him favorably; but he would not enter upon reasons for that opinion then. He found that this great, overshadowing object, looming up in the distant future, would lure away the attention of the people from the matters of interest and advantage that were in their every day paths. It seemed to him that the cart had got before the horse. We do not need the locomotive until we have a track for it to run upon. Let us lay this *first*, then place the steam upon it, touch the "critter" under the flank and "go-ahead!" All, then, will be right.

Every farmer's son and daughter, he said, has the means of commencing an agricultural education now, *this moment*, if they will but improve the means already before them. They know how to read and write—let them put these attainments into practice, by studying some of the excellent works on the great art in which they are engaged, and which are full of sound truths and poetic beauty. Such works are numerous and cheap, and will afford all the instruction that any college can afford,—and it may be gathered before the evening fire, or in the refreshing shade of a tree planted by one's own hands. A little help may occasionally be needed, but that may always be found by the earnest seeker after truth, in some educated person at hand, who would be glad to contribute his aid.

Some two or three good books will present all the principles that underlie the art, and as the farmer is usually a close thinker, he would ponder in the fields upon the chapter he read the preceding day or evening, compare the teachings with his experience on the farm, and so fix the facts of both upon his mind as never to be forgotten. A reading and reflecting farmer is a hard man to argue with, if you wish to controvert his opinions. "Beware of the man of one book," is the old Spanish proverb, and it will hold good with the farmer who reads but little. Reading, then, is the first step towards an agricultural education, —and the next is

Observation. The farmer should be keen-eyed and quick-eared, seeing and hearing everything that is going on around him. Once or twice a month he should visit others and learn whatever he can glean from them by eye or ear. The next is, *Farmers' Clubs* and *Farmers' Talks*. Mr. Brown extended his remarks upon these points, giving facts to sustain them.

Mr. Flower, of Agawam, endorsed farmers' clubs.

Mr. Wetherell, of Boston, said the mind must be prepared for the reception of scientific knowledge, as the soil is for seed. He thought the remark of the speaker who said the best farming is seen in that country where agricultural colleges receive the least patronage, should be remembered by all. Much was said by all the speakers which we have not space for.

A vote of thanks was presented to Farmer SHELDON, of Wilmington, for a basket of apples of a new variety. It being nameless, it was voted to call it the "*Sheldon Apple.*"

On Monday evening, March 16th, was held the ninth meeting of this series. Subject of discussion, *Root Culture.*

Mr. HUBBARD said he had raised nine tons of ruta bagas on a little more than half an acre of land. Ploughed in green manure.

Mr. HOWARD advocated root culture, because roots are promotive of health in animals fed on them. The horse is very much benefited by carrots. The carrot improves the quality of milk. A loose soil is best suited to the growing of carrots. Swedes grow better on tenacious soils. The common English turnip is easily grown and about as good as any of them.

Mr. HUBBARD, of Sunderland, said swamp muck is favorable to the growth of English turnips. He top-dressed a sandy hill with muck and grew a fine crop of turnips. Farmers turn over sward land from the last of June to the 15th of July and raise a good crop of turnips, after having taken off a crop of hay.

Mr. FLINT did not succeed in growing carrots owing to weeds. Manured lands are subject to weeds; therefore, before trying to grow roots, this subject should be considered. Concentrated manures will in a measure overcome this difficulty. He recommended the parsnip. He was unable to see why the sugar beet should not be grown here for making sugar.

Mr. WETHERELL, of Boston, said, that the question that seems to underlie the subject, is, whether it is economical to grow roots at all, for feeding cattle. He had doubts on the subject. He believed the corn crop a more profitable one for feeding cattle than a root crop.

Mr. DREW, of Boston, said he grew three bushels of turnips as easy as one of carrots. He recommended roots for cattle. He could not recommend farmers to grow carrots. Concerning turnips he had much confidence in them for feeding cattle, as he learned from his own experience.

Mr. SMITH, of Granby, did not believe the root crop so profitable for him as growing corn. He thought the English would not grow roots if they could grow corn.

Mr. TOWER, of Lanesboro', spoke highly of root culture, appealing to English practice in confirmation. He could raise 600 bushels of turnips per acre, and sell them for 25 cents a bushel. If cows are fed immediately after they are milked, the milk will not taste of turnips.

Mr. MORTON, of Williamsburgh, spoke of the effects of carrots and ruta bagas on the soil, the latter being injurious to the following crop. He preferred carrots for cows, as turnips make the milk taste of them. He had grown carrots on the same piece of ground for 12 years.

Mr. FLOWER said he would not grow carrots as an infringement upon the corn crop.

Mr. WETHERELL said English authority as quoted to indorse the economy of root culture is not pertinent to this country, as there they cannot grow Indian corn, as we can here. He spoke of the value of corn fodder from an acre of ground as equal to the hay that would grow thereon.

Mr. WARREN, of Auburn, said the raising of roots in Worcester county had been tried and abandoned. Carrots for horses are too debilitating. He could never increase the quantity of milk by feeding carrots to cows. Cattle can be kept cheaper on hay than anything else. Swamp hay is ruled out for feeding cattle.

Some of the speakers, we notice, spoke of the amount of water contained in roots as an argument against their use. This does not seem to us as sound reasoning. The potato, for instance, has 75 parts in 100 of water, yet, who would refuse to cultivate this root because it is three-quarters water? The potato, we esteem as one of the most wholesome articles of diet known to man. It contains just about the right proportions of nutritive matter to the bulk. A man could probably live and labor for months—perhaps years—upon potatoes, salt and water. A dog will live, we believe, about 14 days, fed only upon flour bread, but we doubt not he would live long and flourish, upon a plentiful supply of mealy potatoes.

The truth is, we know little or nothing of the vital principle, or principle of life, that lies beyond the component parts of the food we produce, either for man or beast. The strong probability is, that if we should separate the water of potato from its more solid parts, and eat and drink them separately, we should soon die,—whereas, eating it as God has prepared it, we should grow hearty and strong.

This is the usual mistake made in regard to feeding roots to cattle. Why, we are nearly all water ourselves. A stout man has only about 30 pounds of solid matter, and yet he would be esteemed exceedingly palatable and nutritious to some folks, after all!

WOOL GROWING.—The attention of the reader is called to an article of unusual interest, on this subject, on another page. It is from the pen of a gentleman thoroughly acquainted with his subject, one who has had long and intimate acquaintance with it. The article was written at our special request, and we hope will be succeeded by others on this and kindred subjects. Our Vermont friends, especially, are requested to give the article their candid consideration. They may find in it the germ of the highest improvements in the production of sheep and wool.

CATTLE BREEDERS' CONVENTION.—The Cattle Breeders' Association met, elected officers, raised three hundred dollars by subscription, discussed breeds, and adjourned to Worcester a year hence, all on Wednesday, March 4th, at Hartford. The greatest enthusiasm was manifested over the solid basis of the Association. It is an American affair, originating in New England, and its sole object is the protection of breeders and the public from imposition by pedigrees. Any pedigree worth inserting in the society's list is examined for a small fee, which is refunded if they are rejected. The following officers were elected: H. H. Peters, of Southboro', President; E. H. Hyde, B. F. Andrews, H. G. White, A. O. Cummins and Peleg Winslow, Vice-Presidents; H. A. Dyer, Secretary and Treasurer; J. S. Allen and C. F. Pond, Auditors.

AGRICULTURE THE GREAT INTEREST.

Nothing is more common, even among *wise* legislators, than to hear people talking of the superior importance of commerce, mechanics, arts and manufactures, to that of *agriculture*, as a business—and speaking of the vast preponderance of capital invested in those branches of industry over that engaged in cultivating the soil. We do not speak of this complainingly, but only as the natural result of that broadcast prejudice which exists against the occupations of rural life, and of that want of information in the public mind, which places in a second or third rate position the great art that sustains us all. No error can find so little foundation as this, and a trifling investigation of the various census tables published, will justify what we assert.

A few years ago, when the farmers of the State of Maine asked the Legislature to establish a State Board of Agriculture, all the old objections were urged against it, and among others, that the subject was not of sufficient public importance to justify such a measure. In reply to this, it was stated by a member, first, that commerce and manufactures had, in a thousand ways, directly and indirectly, received the protection and patronage of the general government—and second, that commerce and manufactures were not greater interests than agriculture, but that *more capital was invested in agriculture than all the investments in commerce and manufactures added together!*

The last remark was received with derision, and proof was called for. Application was made to the Superintendent of the Census Bureau, and the following answer returned: "The amount invested in agriculture, in the United States, does not fall short of $5,000,000,000, (five billions,) and the capital in manufactures and commerce together, cannot possibly be more than *one-fifth* of that amount."

For one, we have no special favor to ask of Congress or legislatures for the farmer—but only those helps which are accorded to all classes of our people, and which, instead of crippling the government, would vastly strengthen it. What we do earnestly desire is, that the farmer shall become a more intelligent, self-reliant and systematic man, and then he will soon take proper rank, and exert the most happy influence upon every department of our industrial and political affairs. This must be done in order to place our government on the most stable and permanent foundation, and to secure the greatest national prosperity.

PUBLIC SCHOOLS OF PENNSYLVANIA.—The whole number of scholars in attendance upon the public schools of Pennsylvania last year was 682,-182. The cost of maintaining the schools was $2,773,595.

For the New England Farmer.

FLAX CULTURE---No. 2.

Two powerful incentives are now operating to induce farmers to embark in the cultivation of flax, viz: Its profitableness over other farm products, and a desire to produce a substitute for cotton. That it is the most profitable crop the farmer can raise, at present prices, every one will admit, notwithstanding the remarks I made on the subject in a former article, and as I promised then to give some instructions in regard to its cultivation, I will begin by noticing the objections that some farmers make to sowing, and trying to prove that they are mostly groundless. In the first place, some contend that it exhausts the soil more than other crops. I have raised flax for fifteen years on the same farm, and said farm will produce fully one-third more of any crop than it would at the time I commenced. I do not attribute its increased productiveness to raising flax, but to a judicious system of manuring and high seeding. My system of cropping is this: first, corn or potatoes, second, flax, oats, or spring wheat, and then to rye in the fall, and seed down. Of my method of manuring, I will speak hereafter, but suffice it to say here, that it enables me to take off three crops as above, and leave my land in better condition than when first ploughed. That flax does not exhaust the soil more than oats, or spring wheat, I infer from the fact that my rye or winter wheat is invariably better on the land sowed to flax, than on the oat or other stubble. Others say that land cannot be seeded when sown to flax, which is an error, although it is not as good as some other crops, for the reason that, if the flax is pulled in wet weather, the young grass roots are pulled out, more or less, and if dry weather comes on, they are dried to death; but this can be obviated in a measure by rolling the land after the flax is off. I prefer to take off three crops, and if the land is not suitable for rye, I leave it until spring, and sow to oats or barley, spreading fine manure on top of the ground, which, being harvested in with the grain, secures a good crop, and also a good seed, which is worth as much as a coat of manure on any land.

The greatest objection, in these times of scarcity of labor, is that the harvesting comes just when the farmer is the busiest, and when every other crop is pressing. The only way to remedy this, is to sow a little less of other crops, and sow a little flax, not too much, for I do not approve of every farmer going into the flax business over head and ears, to the neglect of everything else. That flax is an uncertain crop, is very true, but it is very seldom that it does not pay for all labor and leave a little besides, in the poorest of seasons.

The quantity and quality of flax depend very much on the season, probably more so than most other crops, for, unlike corn, it has few enemies, and, unlike corn, it requires a cool, moist season, to bring it to its greatest perfection. Nearly all rich soils will produce flax, except sandy or gravelly land, and even that will grow good flax in a very wet season. Soils that are best adapted to oats, are the best for flax. It should be sown on land that has produced a hoed crop the previous year, as otherwise it is apt to be filled with weeds, which make bad pulling. Sward land, ploughed in the fall, may be sown the next spring, but

should never be turned over and sowed the same spring, as the timothy will come up in it and head out. The ground should be ploughed fine, and levelled down with the harrow before sowing, and harrowed twice after sowing. The quantity of seed sown must be governed by the object in view. If we raise it for the seed, mostly, twenty-six to thirty quarts to the acre is enough, when it will branch out and yield more seed than if sown thicker. The coat will also be coarse and harsh, fit for nothing but ropes and such coarse articles. If a fine, nice coat is desired, sow five pecks to the acre, but for seed and lint, sow one bushel. This is the most profitable quantity to sow at present, as both seed and lint are high, the former being worth $3 25 per bushel, and the latter 25 cents per pound, for the best quality, which is nine cents more than has been known for a great many years. Nothing more is to be done until pulling time, which commences as soon as the leaves begin to fall from the stalk, or when about half of the bolls are turned from the green to a brownish color.

In pulling, great care should be taken to keep it even at the roots, and to discard all weeds, grass, &c., as they produce no lint, and render the seed impure.

That which it is designed to save seed from for sowing, should be weeded two or three times through the summer, which is done by going through it and pulling out all bad weeds as yellow seed, mustard, &c., then thresh the seed off by itself, and it can be kept clean. When pulling, stand with the back down hill, gather the flax with one hand, and hold it in the other. Gather at one time about what will stand on four or five square inches of ground, and raise it just high enough to pull all the flax out, but no higher, as the higher it is raised in pulling, the more liable it is to get uneven. The most convenient size for bundles is just about what a person can grasp with both hands. As soon as a handful is pulled, hold it loosely in the hands and drop it on the ground two or three times, to even the butts, then bind by taking about a dozen stalks of flax and putting them around the handful, taking both ends in one hand, and whirling the handful until the band is twisted sufficiently to hold it. A little practice enables one to bind very fast in this way. It should be set up two and two, and from six to eight in a shock, and as soon as they become dry, bind each shock into a bundle with rye straw, and draw in, handling carefully so as not to shell and waste the seed.

There are two methods of threshing off the seed, viz: by hand, taking the handfuls in the hands and beating the seed ends on a stone, block or some hard substance, until the bolls are all beaten off; and by passing the tops of the handfuls between rollers driven by horse or water-power. Where there is much of a crop, the latter method is preferable, but for small lots, if the owner has no power of his own, it is cheaper to do it by hand. A person will whip from one-half to three-fourths of an acre per day by hand, and a set of rollers with men will thresh from four to six acres, and take care of the flax. Great care is necessary in cleaning the seed, it being light and very flat, it is liable to be blown over in the chaff. I have known as much as two bushels to the acre, wasted in this way by careless workmen. Spreading is another operation requiring care, as it is necessary that it should be spread evenly in order that it may rot uniformly. It should be spread about the same thickness that it grew, and as evenly at the butts as possible. When about half rotted, it must be turned, beginning at the last swath spread, and running a long, smooth pole under the flax a little above the middle, and turning it over, pressing the swath down after turning to prevent the wind from blowing it around. When it can be taken in the hand, and by rubbing, the sheaves can be broken and separated from the coat, it is fit to take up, which is done by raking it into hurdles the size of oat sheaves, and binding, when it is ready to take to the dressing-machine. As the dressing is a trade by itself, which the farmer has nothing to do with, I will say nothing about it. It is customary here for the farmer to deliver the flax at the mill, and the dresser fits it for market and sells it, reserving $2 50 per hundred for his work.

Any other information respecting its cultivation which I possess, will be cheerfully given to any desiring it. AGRICULTURIST.

New York, January, 1863.

For the New England Farmer.

BEST PEARS FOR CULTURE IN MASSACHUSETTS.

At a recent Legislative Agricultural meeting at the State House in Boston, the presiding officer remarked that the Massachusetts Agricultural Club, an association composed of gentlemen eminent for their interest in agriculture, have, after many years of deliberation on the subject, decided unanimously, upon the twelve kinds of pears best adapted for cultivation in Massachusetts. They are as follows: Bartlett, Louise Bonne de Jersey, Urbaniste, Beurre d' Anjou, Vicar of Winkfield, Merriam, Seckel, Onondaga, Sheldon, Beurre Bosc, Lawrence and Doyenne Boussock.

Now with all due deference to the opinion of these gentlemen who have, "after many years of observation," come to this conclusion, I was surprised to find such varieties as the Belle Lucrative, Winter Nelis, Paradise of Autumn and Buffum, were not included in their list, in preference to the Onondaga, Merriam, Doyenne Boussock and Lawrence. That fine fall fruit, the Belle Lucrative, has not only increased in size, annually, from its introduction, but was one of the few that remained uninjured in the winter of 1861, which was so disastrous to the fruit buds, as well as the shoots of many of our finest pear trees. The Beurre Bosc suffered extensively; not only grafts of three or four years were killed, but in some instances whole trees. The Onondaga, with us, is a bad bearer, and rather an acid fruit. The Merriam has not been grown with us sufficiently long to judge of its character. The Buffum, which is not in the list, I consider one of the best market pears we possess; a fine grower and great bearer.

In making a selection of pears for any known locality, one of the greatest points is to ascertain what varieties flourish well on light, warm soil, and those on the contrary, that require land of a cool and more retentive nature. The Wilkinson, a fine, native, fall fruit, and the Lewis, a winter variety, require land of the last description. On a light, sandy loam they are small and worthless.

Among the great varieties of pears that have been brought forward within the last twenty years,

it is difficult to say, decidedly, what are the best twelve sorts; much more so than with apples. I will venture, however, to append a list of twelve, which include the largest proportion of those named: Bartlett, Louise Bonne de Jersey, Urbaniste, Beurre d' Anjou, Winter Nelis, Paradise of Autumn, Seckel, Belle Lucrative, Sheldon, Beurre Bosc, Glout Morceau and Buffum.

Salem, March, 1853. J. M. IVES.

For the New England Farmer.

A LISTENER AT THE STATE HOUSE.

At the Sixth Agricultural Meeting at the State House, when the subject for discussion was *Fruit*, and the Chairman Hon. MARSHALL P. WILDER, this gentleman made some interesting remarks upon the general topic. It can hardly be supposed that many then present could concur in *all* the views he expressed, as fruit culture must admit of many fluctuating, vague and only partially sustained opinions. I do not intend to follow the gentleman in the order of his remarks, but will venture a few comments upon what he and some others said, with a view of facilitating the approach to truth.

Mr. Wilder observed that *underdraining* was the basis of good orcharding, even upon hill-sides. I agree with him, that a mellow soil, scarifying the surface, surface-manuring in the autumn, and underdraining on low, wet or very cold soils, are important requisitions in good orcharding. I am not a little inclined to believe, however, now the subject of draining has been brought so prominently before the agricultural community, that demands will be made which may be found hereafter to be rather extravagant. Draining hill-sides with tiles *may be* beneficial to an extent, but whether, all things considered, it would *pay*—such positions being usually rocky and admitting of no stagnant water—is the mooted point. Certain it is that very excellent orchards exist upon hill-sides that are not underdrained.

One reason the Speaker gave why orchards should be underdrained, (both apple and pear, we understood him to say,) was new to us. *Undrained* land, in the autumn, he said, was subject to *a rising of cold moisture*, which was injurious to the roots of trees at the time they needed warmth for the maturity of their fruit. In *underdrained* land the earth is dry and warm as deep as the roots usually penetrate, and thus the ripening process of fruit is facilitated.

If I have understood the theory of underdraining correctly, it is this: Water should not remain on the land to evaporate by the sun, because no heat will penetrate the soil till it becomes dry; neither should it *run off* from the surface, as on side-hills, but should *run down* into the soil, carrying with it the fertilizing properties from the surface—which it does where there is an outlet below. Thus the soil is kept porous to the depth of the drains. Some of the roots of trees run equally deep, and are thereby enabled to withstand a drought better than if on undrained land, as the rains readily strike them in sinking, and they are enabled to draw moisture from the subsoil more freely, as it has no impediment to encounter in rising, as in undrained land, where there is frequently a hard, gravelly subsoil a foot or more from the surface, which prevents this rising of moisture from beneath when the more superficial roots need it from the dryness of the upper soil. Hence the prevention of drought is one great object in underdraining. In a word, it is to keep the soil open and permeable to a certain depth, (say three feet,) so that it may retain from rains only the moisture it needs, or draw from below, by capillary attraction, just what it requires. Underdraining may be defined as the *hygrometic regulator of the soil.*

It would seem, then, that underdraining gives that necessary moisture to the roots which Mr. Wilder complains of, and which he would remedy by underdraining! It can hardly be admitted that, in September, when we are quite liable to droughts, the moisture drawn up to the roots is so *cold* as to check the ripening process, since the earth has been heating all summer, and is rather slow to part with its caloric. Certainly, the objection cannot hold good as to *apples*, if it should to *winter pears*. For the former to be thus affected, the soil must be very cold indeed. Winter pears, however, we think should be placed in warm positions, whether the soil is underdrained or not, although to this there may be some objections, which will appear further on. Underdraining may possibly supply a warmer moisture, but I submit that this warmer moisture (than that which the ordinary condition of the soil affords) is not important with most fruit trees in the early autumn months.

Col. Wilder gave us another reason why orchards should be underdrained, and that was the "prolongation of the season." This is granted. But while the warm season is lengthened in the autumn, it is also hastened in the spring. Now, if the soil is warmed earlier in the spring by this operation, will not the *fruit buds of trees start before the weather is sufficiently settled and warm for their security?* If so, (and the conclusion seems inevitable,) will not underdraining, while it perfects the crops at one end of the season, endanger the buds at the other? Horticulturists speak of the importance of northern and exposed locations, and of late-blooming varieties of fruit as avoiding spring frosts; but underdraining tends to destroy all this security, whether in apple, pear, or any other fruit trees.

Mr. Wilder also spoke of the importance of *thinning out fruit.* This is very well, though a difficult task for a man with many overburdened trees. This superfecundity, the speaker well said, exhausts the trees, and he inferred that on the succeeding year they would not bear in consequence of this exhaustion. But will a tree thinned of one-half of its fruit one year, bear half as much the next? Can it be thus brought to bear equally—or anything like equally—each year? But suppose we destroy a portion of the blossoms; will this equalize the bearing? I know of no one who has thus been successful. Some have thought that, by destroying the blossoms on a young tree whose variety was known to bear on even years, it might be brought to bear the odd years; but they find nature will not be thwarted. Fruit buds are formed the year previous to bearing; hence, while the spurs are occupied with a crop, they cannot well form buds for the subsequent year. Accordingly it bears little or none the next season. This seems to be a general law of fruit trees, particularly of the apple and pear, although in some trees less fixed than in others. And wheth-

er it can be modified or changed to another year by any art or manipulation, is exceedingly doubtful. Why have not the sudden changes of the weather, canker worms and other insects, so equalized the bearing seasons of fruit trees that one season would be found to be about equal to another, instead of being so much greater and so reliable as it is now upon even years?

Col. Wilder further observed that the sudden revulsions in our climate of late, had shown that some varieties of pears are even *more hardy than the apple*; for, he added as an evidence thereof, that his pear trees bore the succeeding year, while his apple trees did not. I respectfully submit whether this is a fair inference. Perhaps the apple trees would not have born even *without* these sudden extremes of heat and cold; for, upon Mr. W.'s theory, they might have been exhausted the previous year; or it was not their bearing year; or they did not bear for some unaccountable reason, as is frequently the case with fruit trees. When an apple tree is killed outright in winter beside a pear tree which survives, this we should call the primary test of hardiness; and where the fruit buds of the apple are *known*, by ocular demonstration, to have been destroyed, and those of the pear saved, this is a secondary test. But the speaker did not say that he had so proved the relative hardiness of the pear; the fact of fruiting and non-fruiting decided the question.

In respect to the supposed hardiness of some of our choice varieties of the pear over the apple, a relative of mine, in the southern part of Wisconsin, informs me that he has not been able as yet to procure pear trees that will endure the severity of the winters in that region; and that only a few apple trees can survive them—among which are the Williams, Hubbardston Nonsuch, Raule's Jenette, and a few others. And further upon this point, Gustavus de Neveu, of the same State, observes, in the Patent Office Report, (1854, p. 298,) that "Pear trees do not stand our climate so well as the apple or plum, a few having perished last winter from the intense cold." He thinks, however, a few varieties may endure.

Can trees detect and reject *poison* in their food? Allusion being made by another speaker to the presence of oxide of iron in the soil and its supposed good effects, Mr. Wilder said he placed a quantity of iron filings around a plum tree as an experiment, and as some sap flowed from the branches, running down and discoloring them, he was satisfied the iron had gone up. The tree, however, died; and the speaker observed that vegetable physiologists had erroneously asserted that a tree would *reject poison*. For myself, I am not aware that they ever had so asserted. De Candolle does not; and it is of very frequent occurrence that with brine or suds, (salt or potash,) trees are killed outright. A little of these substances might do trees good, but they have no power to limit them when supplied in great quantities.

A word on the *black knot* will suffice. Mr. Tower said that the way he got rid of this pest of plum culture was to cut it off as fast as it appeared. I tried this for a time, till I found that every new limb springing out was almost immediately affected by it, which if cut off would leave none for fruit the following years. This evil is particularly annoying when the trees reach about a dozen years. The best way is to *cut clean down to the ground*, as the boy cut his dog's tail off up to the neck! A plum tree, in the vicinity of Boston, is one of the meanest cumberers of the earth; and if I were to set fifty gardens, not one should have a place in them. Reject ephemeral trees and plant those of longevity. HORTUS.

Oak Cliff Cottage.

For the New England Farmer.

MAPLE SUGAR.

MR. EDITOR:—In your paper of February 21, I find an article with the above heading, signed "A. M. F." and on which you make remarks. I sugar off my syrup after it is cold. My manner of boiling is to take two cast iron boiler kettles, holding twenty and forty gallons, set them in cast iron arch plate with holes of suitable size to let them rest firmly on the rim; lay the plate on two pillows of brick with a chimney. These two kettles will boil the sap of two hundred trees, and I prefer them to two pans that will boil twice the bulk of sap. I heat in the small one, and dip into the large one, until I get in fifty pailfuls, or so, then I syrup it down so thick that it will grain when it is boiled away one-half. I then strain it through a fine strainer into a tin or wooden vessel, and set away to cool. When intensely cold, I put it into a brass or copper kettle or boiler, and add one-half pint of skim milk, bring to a slow boil and skim as it boils, until it is perfectlv clear. When it becomes thick enough to be waxy, when dropt upon clean snow, I pour it into a tub prepared for the purpose, and in about a week, I tap the tub at the bottom and draw off the syrup, which, for table use, is much before any sugar-house syrup you can find.

I would remark here, that I drain my syrup into my brass kettle, and leave all the nitre and fine dirt in the bottom, which I had much rather would remain there, than to be in the sugar, for I think it blackens the sugar and destroys the flavor. Too much pains cannot be taken to keep the sap, syrup and sugar clean.

Do not let the women folks take the buckets into the house, and put cream, sour milk, salt meat soap-grease, &c., into them, for nothing will cleanse them until the sap does it, and your sugar is spoiled.

I bore my trees with a five-eighth bit, and use a tin spout and hang the bucket on a wrought nail by a strip of leather nailed to the bucket. When the sap season is over I take down my buckets, wash them clean and put into my sugar-house, and they only need scalding the next season. I prefer the machine buckets to any other, as they are easier kept clean, and take up less room than the homemade buckets. G. K. J.

Danbury, N. H., March 2, 1863.

SPLITTING WOOD.—S. Parsons says, the boys engaged in splitting the year's fuel, can make it easier, and lessen the danger of cutting their feet by the following arrangement: Take a large block of hard wood, say two feet or more in diameter, and of convenient length; set it up endwise, and in the middle dig out a hole seven or eight inches in diameter, and about six inches deep. This will hold the sticks upright, and they can be split into several pieces without handling. The hole can be easily made in a very little time with an auger and chisel.

AGRICULTURE IN THE STATE OF MAINE.

In addition to ordinary Neighborhood Farmers' Clubs, Town and County Agricultural Societies and Exhibitions, and a State Association, there is in Maine a deliberative body, consisting of one member from each county of the State, which holds an annual session of fourteen days, to investigate, discuss and report on matters pertaining to the general husbandry of the State, and is entitled the "Maine Board of Agriculture," one member of which acts as Secretary. Besides other duties of a more general character, this Secretary is required to prepare the doings of this Board for publication, together with such recommendations and suggestions as the interests of agriculture seem to require. To the kind attentions of S. L. GOODALE, Esq., who has very ably filled this office for seven years past, we are indebted for the "*Seventh Annual Report of the Secretary of the Maine Board of Agriculture*, 1862," a volume of 216 pages. Turning over its cleanly-printed pages, we count some fifteen papers on various agricultural topics, written by different members of the Board, to whom these topics had been previously assigned, and read during its last session. But valuable and interesting as these reports and proceedings are, they occupy less than one-half of the volume. The remaining portion is devoted to an elaborate report of the Secretary on the Dairy, Agricultural Statistics, compiled from returns of town assessors, &c., &c., closing with some hopeful remarks on the prospects and duties of the farmers of Maine in these "troublous times." We copy a few lines:

"It is not for me here to speak of our duties as citizens; God helping us, we will support our Government, uphold the Constitution, crush insubordination and lawlessness, and maintain law and order and justice, North and South. But of our peculiar duties as farmers I may speak. Taking the country together, the years 1860, '61 and '62, have been very plentiful years, and the help afforded by these abundant crops, in enabling us to sustain the call for men and means, can scarcely be over estimated. The last call for 600,000 men was responded to, for the most part, after the crops for 1862 had been safely garnered, and the men came, in large proportion, from the food-producing-ranks. We are getting to be short-handed. Experience teaches us also, that a series of abundant seasons is usually followed by a succession of more scanty ones. There is a demand upon us to lay our plans for the coming season wisely and well, so that every hour of the time, and all the means at command, be employed to the best advantage. There is need of the acquisition and diffusion of knowledge, and the great extension of improved practice. There is need of the utmost economy in saving, and skill in applying the manures of the farm-yard, and need to draw upon all other sources of fertilization within our reach. There is a louder call than ever for the employment of improved implements and farm machinery, for every contrivance begotten of the necessity and ingenuity of man, by which the powers of nature or the force of brutes may supply the lack of human labor. There is need of brains as well as muscles, of knowledge as well as force. There is need that no unprofitable beast be allowed to consume the forage which ought to yield a valuable return. * * * Help one another. Encourage one another. Be of good cheer."

From the hasty glance we have given the reports or "papers" submitted to the Board, at its last session, our impression is most favorable as to their ability. A single paragraph in the paper read by Dr. J. C. WESTON, of Bangor, on "The Diseases of Vegetation," so well illustrates one practical benefit which agriculture may reasonably expect from science, that we must copy it:

"During the existence of the Roman Empire, when the practice of medicine by quacks was based on isolated facts, the majority of which were fallacious, the average duration of human life was ten years less than at the present time. This shows what has been accomplished by careful research, more accurate knowledge, more practical skill. The same careful study of all the laws which regulate the functions of vegetables in health; the same attentive observation of those changes and modifications which result in disease and death; the same persevering endeavor to trace effects and differences to their producing causes, will conduce to the same rational and successful treatment. For there is a close similarity between the vital structures and phenomena of plants and animals. Both have the same chemical constituents."

An important truth is strikingly expressed in the following extract from a report by Mr. ROBERT MARTIN, of West Danville, on "The Feeding of Farm Stock," and with it we must close our extracts for the present.

"A good-sized one-year-old in usual flesh at commencement of winter, will weigh about 600 pounds—a four or five-year-old ox, 1,500 pounds. It is not so uncommon as it ought to be, for them to fall off during the winter from one-fourth to one-third in weight, for want of proper food and shelter. The result is, the owner has lost on the year-old, 200 pounds, and on the ox 500 pounds of beef during the winter, which is worth in the one case $8, and in the other $20. The animals have really consumed one-third of themselves to carry them through the winter. Often our neat cattle are fed in the winter on beef and tallow, sheep on mutton, hogs on pork and lard, horses on horse-flesh—all expensive articles of food compared with hay, grain and the various root crops."

LIMA BEANS.—I have been so successful with an experiment that I was induced to try this year, with my Lima beans, that I have thought it might be worthy of recording in your columns. When the beans are planted early, and wet, cold weather follows, many of them never vegetate; previous to planting this year I melted up some tallow, and, when cooled a little, I dipped in the beans, coating them with it; the result is, that I have not had a single bean that has failed to vegetate, and they are growing finely.—*Farmer and Gardener.*

EXTRACTS AND REPLIES.

QUERIES.

Do you seriously believe that if a fat ox, on the way to the slaughter-house, should happen to eat one single onion, it would so taint, affect and flavor the whole meat, that all who eat of it would taste the onion? Do you believe that any kind of food or process of feeding will render coarse-wooled sheep fine-wooled sheep; or the coarse hair on animals fur; or the coarse feathers on birds down? MOUNT GRACE.

Warwick, 1863.

REMARKS.—We think it *possible* that all these things might arise from the causes you mention. Almost everything you eat has gone through a similar process. The fine-haired, soft-skinned ox that affords such juicy and delicious steaks, has been brought by culture from the coarse-haired, thick-hided, ill-shaped animal that rarely exceeded 700 or 800 lbs. in weight. So it is with the apple, pear, peach and plum. With the potato, parsnip, carrot and celery,—they have all been made tender, juicy and palatable by good treatment, that is, careful *culture*. Why that process should not affect the ox, sheep or fowl, we cannot see.

But the onion seems to be a little too strong for our correspondent. It is not our story—we told the tale as 'twas told to us. Yet we cannot see anything improbable in it. It is said by physiologists that, when milk is taken into the mouth, a portion of it is almost immediately converted into blood, and is bounding through the system. Why do strychnine and other poisons destroy life so suddenly unless they pass directly into the circulation? We have an unfortunate friend who has what is called a "rose fever," if he is in the neighborhood where they bloom, and has many times been obliged to shut himself up in a close room during their blooming season. He has all the appearance of a person with a heavy cold. This is all occasioned by the smell of the roses. Will "Mount Grace" tell how much of those odors he had inhaled? Would it be appreciable by the sense of sight, or touch, or weight, by the most sensitive scales? And yet the whole system is affected by it. Why not the ox, then, by a single onion!

Other persons are as unpleasantly affected by the smell of new-made hay, and when near it invariably have what is called the hay fever. Such cases are numerous and well authenticated.

SALES OF SHEEP IN VERMONT.

As you like to keep your readers posted on what is going on in the country, I thought to send you a few words in regard to what we Vermonters are doing in sheep. There have been a great number of sales of pure blood Spanish Merino sheep from Rutland and Addison counties; quite a large lot to Western Pennsylvania; also to Ohio; and our Maine neighbors are going into the business. I saw part of a car-load last week Tuesday, bought by GEORGE LADD, of Starks, Somerset county, Me. They were a very choice lot of Atwood lambs, from the celebrated flock of B. B. Frothingham, of Shoreham. I hope we may see more of our Maine friends. FARMER.

Rutland, Vt., Feb., 1863.

RECIPE FOR SAP BEER.

Take about nine pailfuls of sap and put in an armful of spruce boughs and birch twigs. Boil the whole together, till the sap is reduced to about three pailfuls. Strain it into a clean keg, and put into the cellar; loosen the bung, and it will work so as to be good in about two weeks. It will keep as long as beer made with sap and hops, and be as much better as it is less expensive. C. M. P.

Cabot, Vt.

SHEEP EATING WOOL.

I have a neighbor who has a few sheep; he has always fed them well and keeps them in good order. During the last fortnight he noticed two of them had lost wool off their thighs, as if some one had clipped it off. One day he caught a yearling sheep eating it off by large mouthfuls, and he, as well as more of us, would like to know the cause and the remedy, if there be one. If you or any of your numerous readers will give us information as to the above, you will greatly oblige E. HEBB.

Jeffersonville, Vt., March 1, 1863.

STATE BOARD OF AGRICULTURE.

The State Board of Agriculture held a meeting at the State House on Thursday, February 26, and in the absence of His Excellency the Governor, Hon. Marshall P. Wilder, of Dorchester, presided. A variety of business was transacted, the item of most general interest being the appointment of delegates to visit the several agricultural fairs for the coming year, as follows:—

Essex Society, MATTHEW SMITH.
Middlesex, JAMES THOMPSON.
Middlesex South, HENRY CHAPIN.
Middlesex North, Hon. EPHRAIM W. BULL.
Worcester, THOMAS MOTLEY, JR.
Worcester West, ABEL F. ADAMS.
Worcester South, LEVI STOCKBRIDGE.
Worcester North, HOLLIS FIELD.
Worcester Southeast, GEORGE B. LORING, M. D.
Hampshire, Franklin and Hampden, ELIAS GROUT.
Hampshire, Hon. JOHN BROOKS.
Highland, PHINEAS STEDMAN.
Hampden, S. B. PHINNEY.
Hampden East, Rev. CHARLES C. SEWELL.
Franklin, HENRY COLT.
Berkshire, Hon. MARSHALL P. WILDER.
Housatonic, Hon. PAOLI LOTHROP.
Hoosac Valley, SHERMAN CONVERSE.
Norfolk, Hon. SAMUEL L. CROCKER.
Bristol, EDWARD W. STEBBINS.
Plymouth, ASA CLEMENT.
Barnstable, DANIEL A. CLEVELAND.
Nantucket, SAMUEL H. BUSHNELL.
Martha's Vineyard, MOSES STEBBINS.

U. S. AGRICULTURAL SOCIETY.—The principal officers of this Society for the present year, are, President, WILLIAM B. HUBBARD, Columbus, Ohio; Treasurer, BENJAMIN B. FRENCH, Washington, D. C.; Secretary, BEN. PERLEY POORE, Washington, D. C. WILLIAM SUTTON, of Salem, is the Vice President for Massachusetts, and MARSHALL P. WILDER, of Dorchester, is a member of the Executive Committee.

THE SAMPSON APPLE.—Through the attention of Mr. ELBRIDGE CHANDLER, of West Duxbury, Mass., we have received samples of this apple. It is an oblong apple, light-colored, slightly acid, and keeps until apples come again, according to the experience of Mr. Chandler. The tree is a good grower and bearer.

☞John Partridge, of Pittsfield, has been awarded the first premium ($100), by the Massachusetts society for the promotion of agriculture, for experments during three successive years in the application of manures.

ASPARAGUS.

No family in the country, that has a square rod of land to spare, should do without a bed of asparagus.

1. Because it is wholesome as food.
2. Because it is profitable.
3. Because it is easily and cheaply produced.

A bed once well prepared and tended, will last for many years,—we do not know how many,—perhaps twenty years.

If one has an old bed, it would be advisable to preserve seed and sow it, to start a new one. If not, it would be cheaper to purchase the roots than to wait for plants from the seed.

The seeds may be sown as soon as the ground will permit in the spring, or just before the frosts set in, in the fall. Cover the ground with muck or litter, and then with branches to keep it from blowing off. Take off the litter in the spring and the plants will soon appear.

In planting the roots, set the plants 10 or 12 inches apart, in straight lines, and the rows 15 or 20 inches apart. Put the crown of the roots 3 or 4 inches below the surface, then level the bed with the rake.

The bed should be spaded 15 or 20 inches deep, and manure plentifully mingled with the earth. If it were thoroughly trenched, two feet deep, it would pay well.

The plants should not be cut at all the first year, and but sparingly the second. The third will produce a bountiful crop. In cutting, let the knife pass down under the ground nearly to the crown of the root.

Every autumn the bed should be cleaned of the dead stems and the ground covered with manure an inch or two deep. In the spring, this should be carefully forked in and well mingled with the soil, and the bed kept entirely clear of weeds.

How to Cook Asparagus. Boil it in salt and water. When young it will cook sufficiently in 15 or 20 minuies. Toast white bread and dip it into the water the asparagus was boiled in. Lay the toast into the dish, and the asparagus on top of it, adding a little butter to each as you proceed.

Such a dish, with some trifling accompaniments, will make an excellent dinner, three or four times a week.

THE RIVER APPLE.

Among the fruits that seem to us to be peculiarly, and in this case wonderfully adapted to the wants of man, is the River apple. In the first place it is a good looking apple, being above medium size and frequently growing quite large, when the tree stands in rich ground. Its shape is flattish, not flat, nor really oblong, yellow, much red in stripes; tender and juicy; pleasant, slightly acid. It is a fine cooking and eating apple. The books say it is a good grower but poor bearer. Such is not the case with those to which our attention has been called, as the trees bear bountifully. The tree is a handsome one when properly trained.

The peculiar and valuable quality of this apple, however, is its property of gradually ripening through a period of *twelve* weeks. Our attention was repeatedly called to several trees in the summer and autumn of 1861,—when there was almost a total failure of apples,—that were loaded with rare fruit. While under the trees, and selecting fine specimens, the owner stated that the apples began to drop during the *last days of July*, and were in good condition for cooking or for dessert. They continued to ripen and drop in this manner until November, when the supply was exhausted. Small baskets of this fruit were sent to us by the liberal owner, and also to other neighbors, and twenty-five dollars' worth sold by the addition of a few Porters. Beside this, from these few trees, a family of seven or eight persons was constantly supplied with all they wanted for eating and cooking,—and as there were three or four children, the quantity must have been liberal.

It is a remarkable apple, and one that should be on every farm—but, perhaps, not more than a tree or two, or a few at most, unless near a market that can be easily reached daily.

For the New England Farmer.

WOOL GROWING.

The care of sheep, and the condition and quality of the food upon which they subsist, whether in the barn or pasture, has a great influence upon the quality of the wool, and its value for manufacturing purposes. Sudden and unfavorable changes in the pasture and food, whether the effect is to fatten the sheep or make them poorer, will affect the quality of the wool for good or for evil. There are two immediate changes in the fibre at such times. One is in making a joint where the new growth commences, which often separates in carding, on account of its brittleness, thereby shortening the wool, which is often very injurious to the kind of goods in which the wool is being worked and the other is in the change of the oily or fluid substances, both within and without the tube of the fibre, and which, to a certain extent, govern the softness of the fibre and its adaptability to receive color.

Wool taken from a sheep which has died from exposure to cold and change, or which has been for a long time diseased, is always found very hard to take a good color. This is in consequence of the coagulated character of the oily substances in the tube of the wool, which become very hard to remove under such circumstances, and will resist the dye.

Where changes take place in the pasture, which are very striking, the joints before mentioned are not only produced as often as such changes are made, but the substances pervading the interior of the tube will be found to be different between each joint thus made, and will require different solving

powers before they will take the color uniformly through the whole length of the fibre. This effect has been demonstrated the past year very fully in indigo colors, and has worked great damage; at first attributed to the indigo, but subsequently found to be in the wool.

The theory of the influence of climate upon sheep, as well as pasturage and feed upon their wool, is by no means new; though some of your correspondents seem to ridicule the idea. Such persons must be sadly ignorant of the *sheep literature* of the past, as well as of *practical manufacturing* of the present day, or they would not treat an idea of such importance lightly. The first requisite of wool is *fineness*, which is produced under and governed by all the laws of stock raising, such as good blood, or breed, to start with, and feed, pasturage, climate and careful keeping.

The second is *softness*, which is almost entirely governed by the character of feed, pasturage and care, which will fix the character of the "yolk" or oily matter which surrounds and penetrates the tube of the fibre. This substance coagulates and crystalizes around and within the fibre in cleaning, and renders it harsh and brittle, or soft and silky, according to the influences which have governed it in its growth.

The third is the *length* of fibre, which is not of so much consequence when its real length can be estimated by the manufacturer. But for ages it has been well known that the change of climate and condition of the sheep has affected and almost governed the *length* of wool.

Wool comes to us in various states, each country gives it a certain character for our market, all affected by *locality* as well as by the different *breeds* of sheep from which the wool is taken. Australian wool is divided into several varieties. German wool is the finest usually used for broadcloths, in connection with the Australian and Cape wool. The great magnitude of the worsted trade is of comparatively late interest, though very ancient in its introduction, and uses long wool. Spain, Portugal, Denmark, Sweden, Prussia, and in fact all Europe, have changed the whole character of their wool, by changes of breed, climate and keeping, and it only remains for America to do what she *can* do, to produce as good wool, and as much of it, as any country of the same size on the face of the globe. What, in fact, may not Massachusetts do? She can raise the wool for her whole manufactures. She can raise flax as a partial substitute for cotton; and when she does this, she will find her home-product more valuable to her, from the fact that the capital thus saved will fill a gap now open, and growing wider and deeper, *dangerously* so, by importations from other States of products she might do without, and which carry off her silver and gold, as well as much of her best energies without a proper return. S. M. A.

For the New England Farmer.

METEOROLOGICAL RECORD FOR JANUARY, 1863.

These observations are taken for, and under the direction of the Smithsonian Institution. The barometrical heights are given as at a uniform temperature of 32°.

The average temperature of January was 27°; average mid-day temperature, 32°. The corresponding figures for January, 1862, were 19°, and 23°; for January, 1861, 17° and 22°. Warmest days the 23d and 25th, averaging 39°; coldest day the 18th, averaging 1°. Highest temperature, 45°; lowest temperature 2° below zero.

Average height of mercury in the barometer, 29.35 inches; do. for January, 1862, 29.23 inches; do. for January, 1861, 29.23 inches. Highest daily average, 29.98 inches, on the 18th; lowest do., 28.56 inches. Range of mercury from 28.41 inches to 30.00 inches.

Rain fell on four days; snow on twelve days. Amount of rain and melted snow, 3.66 inches; amount of snow, 26,75 inches; corresponding figures for January, 1862, 2.25 inches and 29 inches; do. for January, 1861, 3.97 inches and 34.50 inches. There was but one entirely clear day; seven days were entirely overcast. The comparisons between the thermometrical and barometrical averages of this and the two preceding years will be noticed with interest. This season will long be memorable as the "Warm Winter during the Great Rebellion." A. C.

Claremont, N. H., February, 1863.

HINTS FOR THE SEASON.

THE GARDEN.—Decide *what* you will plant or sow in it, and *when* you will do it, as it will greatly relieve you when you come to the actual work. What trees shall be set, what shrubbery, flowers, or what general improvements made?

SCIONS.—Scions should be cut before the sap is active. Cut them carefully from the ends of limbs of last season's growth. Wrap them loosely in moist paper and lay them in some damp place until they are wanted for use. The bottom of the cellar, if damp, answers very well. Be sure to mark each variety distinctly so that no question shall arise as to what they are. Some persons place them in moist earth or sawdust, but they are rather more apt to mould than when in paper. They should be looked at frequently.

PRUNING.—It is sometimes as important to refrain from doing a thing as to do a thing. Few labors on the farm are more injudicious, in our opinion, than to prune apple trees in *March*, *April* or *May*. It has proved fatal to thousands of trees. Wait till June or October.

GARDEN CRESS.—*(Lepidium Sativum.)*—This should be sown every week from the time the ground can be got in proper condition to receive the seed, till September. It is thought by some, one of the best articles known in the whole list of salads, and is cultivated with the least trouble and expense. The soil should be sandy, light and warm, with a sufficiency of old, well rotted manure.

MAINE BOARD OF AGRICULTURE.—The Maine Board of Agriculture, at its late meeting in Augusta, made choice of the following officers for 1863: President, Hon. S. F. Perley; Vice President, Samuel Wasson; Secretary, S. L. Goodale; Messenger, J. L. Martin.

SALSIFY, OR VEGETABLE OYSTER.

(Tragopogon Porrifolius)—This vegetable somewhat resembles the parsnip in the character and habits of growth. Like the latter it requires a rich, deep soil, and a liberal supply of stimulating manure. The seed may be sown either in the spring or fall. In some sections of the country salsify has been introduced as a field crop for feeding cattle, but unless with very extra cultivation, the roots are too small, and the acreable product not sufficient to warrant its recommendation for this purpose.

As a table esculent, it possesses a more decided and valuable character, and when sliced and fried has a flavor very nearly resembling that of the celebrated shell fish from which it derives its name. It may be taken up in autumn and housed the same as garden esculents, or it may be permitted to remain in the ground till spring.

YOUTH'S DEPARTMENT.

A GAME FOR LITTLE FOLKS.

The *American Agriculturist* thus describes a game that used to afford "us children" much mirth:

One of the party being provided with slate and pencil, calls on each of the others in turn to name some descriptive adjective, as good, pretty, ugly, long, short, etc. These are written in a column at the left of the slate. The writer then places his pencil opposite one of the words, and calls for the name of one of the party, which being given, is written next to the adjective, and then the names of the whole company are written in turn, each opposite the adjective which comes in the order of the list.

The writer now commences at some other part of the list, and each company names some locality, as "on the house," "under the barn," "in the woods," etc., and these are added, one to each name. In the same manner some act is next written, to complete the sentences, as "hauling sawlogs," "sleeping soundly," "shelling corn," etc. When all is completed, the sentences are read aloud. The ludicrous situations described will often cause great merriment. Thus it may happen that "Sweet Susan was before the looking-glass, making faces; or that "Slow John was on the railroad, running a race with the engine;" or that "Long John was hunting the rebels, in the wash-tub." Of course, much fun will depend on keeping the sentences secret till all are read.

WHY THE SEA IS SALT.

The remembrance of "the bountiful Frodi" echoed in the songs of German poets long after the story which made him so bountiful had been forgotten; but the Norse Skalds could tell not only the story of Frodi's wealth and bounty, but also of his downfall and ruin. In Frodi's house were two maidens of that old giant race, Fenfa and Menja. These daughters of the giant he had bought as slaves, and he made them grind his quern, or hand mill, Grotti, out of which he used to grind peace and gold. Even in that golden age one sees there were slaves, and Frodi, however bountiful to his thanes and people, was a hard task-master to his giant hand-maidens. He kept them to the mill, nor gave them longer rest than the cuckoo's note lasted, or they could sing a song. But that quern was such that it ground anything that the grinder chose, though until then it had ground nothing but gold and peace. So the maidens ground and ground, and one sang their piteous tale in a strain worthy of Æschylus as the other rested—they prayed for rest and pity, but Frodi was deaf. Then they turned in giant mood, and ground no longer peace and plenty, but fire and war. Then the quern went fast and furious, and that very night came Mysing, the Sea-rover, and slew Frodi and all his men, and carried off the quern; and so Frodi's peace ended. The maidens the Sea-rover took with him, and when he got on the high seas he bade them grind salt. So they ground; and at midnight they asked him if he had not salt enough, but he bade them still grind on. So they ground till the ship was full and sank, Mysing, maids, and mill, and all, and that's why the sea is salt.—*Popular Tales from the Norse.*

A BOY'S LETTER.

"Now, Bob, I'll tell you what I want. I want you to come down here for the holidays. Don't be afraid. Ask your sister to ask your mother to ask your father to let you come. It's only ninety miles. The two prentices, George and Will, are here to be made farmers of; and brother Nick is took home from school to help in agriculture. We like farming very much, it's capital fun. Us four have got a gun and go shooting. It's a famous good one, and sure to go off if you don't full cock it. Tiger is to be our shooting dog, as soon as he has left off killing sheep. He's real savage, and worries cats beautiful. Before father comes down we mean to bait our bull with him. There's plenty of New Rivers about, and we're going a fishing as soon as we have mended our top joint. We've a pony, too, to ride upon, when we catch him; but he's loose in the paddock, and has neither mane nor tail to signify, to lay hold of. Isn't it prime, Bob? You must come. If your mother won't give your father leave to allow you—run away. Remember you turn up Goswell Street to go to Lincolnshire, and ask for Widdlefen-hall. There's a pond full of frogs, but we won't pelt them till you come; but let it be before Sunday, as there's our own orchard to rob, and the fruits to be gathered on Monday. If you like sucking raw eggs, we know where the hens lay, and mother don't; and I'm bound there's lots of birds' nests. Do come, Bob, and I'll show you the wasps' nests, and everything that will make you comfortable. I dare say you could borrow your father's volunteer musket of him without his knowing it; but be sure any how to bring the ramrod, as we have mislaid ours by firing it off."—*Hood.*

WEEDS AND FLOWERS.—Vice grows rapidly, but virtue is a plant of tardy production. The virtues are, in fact, the flowers, more or less beautiful, which grow in the moral garden of the human heart; but the vices are the weeds, which, owing to a man's innate depravity, spring up spontaneously, and if not suppressed or controlled, soon leave their noble rivals no room to exist in the same vicinity.

LADIES' DEPARTMENT.

ORIGIN OF THE MOSS ROSE.

The angel of the flowers one day
Beneath a rose bush sleeping lay,—
That Spirit to whose care is given
To bathe young buds in dews from Heaven;
Awaking from his slight repose,
The Angel whispered to the Rose,
"Oh, fondest object of my care,
Still fairest found where all are fair,
For the sweet shade thou'st given to me,
Ask what thou wilt, 'tis granted thee."
Then said the Rose, with deepened glow,
"On me another grace bestow."
The Spirit paused in silent thought,—
What grace was there that flower had not?
'Twas but a moment,—o'er the Rose
A veil of moss the Angel throws,
And robed in Nature's simplest weed,
Could there a flower that Rose exceed?

TRAINING THE CHILD'S BODY.

Whatever you wish your child to be, be it yourself. If you wish it to be happy, healthy, sober, truthful, affectionate, honest and godly, be yourself all these. If you wish it to be lazy and sulky, and a liar and a thief, and a drunkard and a swearer, be yourself all these. As the old cock crows, the young cock learns. You remember who said, "Train up a child in the way he should go, and when he is old, he will not depart from it." And you may, as a general rule, as soon expect to gather grapes from thorns, and figs from thistles, as get good, healthy, happy children from diseased, and lazy, and wicked parents.

Let me put you in mind seriously of one thing you ought to get done to all your children, and that is, to have them vaccinated or inoculated with the cow-pox. The best time for this, is two months after birth, but better late than never, and in these times you need never have any excuse for its not being done. You have only to take your children to the old, or new town dispensaries. It is a real crime, I think, in parents to neglect this. It is cruel to their child, and it is a crime to the public. If every child in the world were vaccinated, which might be managed in a few years, that loathsome and deadly disease, the small pox, would disappear from the face of the earth; but how many people are so stupid, and so lazy and prejudiced as to neglect this plain duty till it is too late. So promise me all seriously in your hearts to see to this, if it is not done already, and to see to it immediately.

Be always frank and open with your children. Make them trust you, and tell you all their secrets. Make them feel at ease with you, and make free with them. There is no such good plaything for grown up children, like you and me, as weans—wee ones. It is wonderful what you can get them to do, with a little coaxing and fun. You all know this as well as I do, and you will practice it every day in your own families. Here is a pleasant little story out of an old book: "A gentleman having led a company of children beyond their usual journey, they began to be weary, and all cried to him to carry them on his back; but because of their multitude he could not do that. "But," says he, "I'll get horses for us all;" then cutting little wands out of the hedges, as ponies, for them, and a great stake as a charger for himself, this put mettle in their little legs, and they rode cheerily home. So much for a bit of ingenious fun.—*Dr. Brown's Essay on Health.*

DOMESTIC RECEIPTS.

Glossing Linen.—Inquiry is frequently made respecting the mode of putting a gloss on linen collars and shirt bosoms like that on new linen. This gloss, or enamel as it is sometimes called, is produced mainly by friction with a warm iron, and may be put on linen by almost any person. The linen to be glazed receives as much starch as it is possible to charge it with, then it is dried. To each pound of starch a piece of sperm paraffine, or white wax, about the size of a walnut, is usually added. When ready to be ironed, the linen is laid upon the table and moistened slightly on the surface with a clean wet cloth. It is then ironed in the usual way with a flat-iron, and is ready for the glossing operation. For this purpose, a peculiar heavy flat-iron, rounded at the bottom and polished as bright as a mirror, is used. It is pressed firmly upon the linen with much force, and this frictional action puts on the gloss. "Elbow grease" is the principal secret connected with the art of glossing.—*Scientific American.*

Yeast Cakes.—Boil a handful of hops in a quart of water; strain off and stir in half a pint of flour, while scalding hot; add two tablespoons of sugar, and one teaspoon of ginger, and when milkwarm, add a half or two-thirds of a teacup of lively yeast, and set in a warm place (but not too warm,) to rise; when light, stir up thick enough to knead with Indian meal; roll up with your hands in the form of a rolling-pin, and slice off half an inch thick. Dry them in the sun and air. If in the summer, care should be taken not to heat them too hot, if dried by fire, as it spoils the life of them; turn them frequently.

Apple Jelly.—Slice whole apples, (cores, parings and all,) cook them with just water enough to cover them till reduced to a soft pulp. Take the rind and juice of four lemons; strain this pulp, (not squeezing much or going over it twice,) add the lemons, measure pint for pound white sugar; let it boil a half hour, and turn into forms.

Soda Crackers.—Four teacups of flour; 3 do of water; 1 of butter, rubbed into the dry flour; 4 teaspoonfuls of cream of tartar; 2 of soda. Salt to the taste. Roll very thin.

Rogrod—*a summer dish in Norway.*—Three pounds of currant juice, three pints of water with sugar, *ad lib.*, and a flavoring of almonds or cinnamon, (one, or one and a half ounces.) Boil the mixture, stirring in, when it begins to boil, fourteen pounds ground rice, or one pound sago. Boil it one-quarter of an hour, stirring often. Pour into moulds first dipped into cold water. When cool, turn out and serve with cream and sugar.—*Norse Folk, by* C. L. Brace.

Small Quaker.—This is the latest style of hoop introduced for ladies' wear. It is moderate in circumference, and leaves the drapery to sweep gracefully from the waist to the sidewalk, and so around the corner, if the lady pleases. Success to the "Small Quaker," will say the owners of omnibuses, public halls, four-rod avenues, and other places frequented by the public.

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MORE FINE SHEEP FOR NEW HAMPSHIRE.—We understand that Peter W. Jones, Esq., of Amherst, N. H., has just added to his fine stock of pure blood sheep, a buck and several ewes from Humphrey's importation of Spanish Merinos, bred by Stephen Atwood, of Woodbury, Conn., some Cotswold ewes of Geo. C. Hitchcock's importation, and some very fine animals selected from the flock of Stephen Rowell, Esq., of Weare, N. H.

LAMB CHOPS.—Cut off the end of the bones and trim off part of the fat, then pound, wash and dry them on a clean towel, and season with pepper and salt. Prepare bread crumbs or crackers, as for oysters, whisk two eggs with one gill of milk, then dip the chops, one at a time, first in the egg, then in the cracker, put the crumbs close to the meal, and fry them slowly in hot lard, a fine brown on both sides. Send to table hot.

CHILDREN.—I remember a great man coming to my house at Waltham, and seeing all my children standing in the order of their age and stature, he said, "These are they that make rich men poor." But he straight received this answer, "'Nay, my lord; these are they that make a poor man rich; for there is not one of these whom we would part with for all your wealth."—*Taylor.*

☞ A new light has been recently discovered for locomotive engines, which is said to combine remarkable brilliancy with great cheapness. It is produced by throwing a jet of gas and air upon a cylinder of lime, and costs only fifteen mills an hour, while the ordinary railway burner costs six cents an hour.

DON'T be in haste to be rich. Remember that small and steady gains give competency.

CATTLE MARKETS FOR MARCH.

The following is a summary of the reports for the four weeks ending March 21, 1863:

NUMBER AT MARKET.

	Cattle.	Sheep and Shotes and Lambs.	Pigs.	Live Fat Hogs.	Veals.
February 26...1808		3564	125	—	50
March 5...1257		2986	11	—	60
" 12...1718		2076	200	70	63
" 19...1390		1809	300	60	100
Total.....6173		10,435	636	130	275

The following table exhibits the number of cattle and sheep from each State, for the last four weeks, and for the corresponding four weeks last year; also the total number from January 1 to March 19,—twelve weeks—of each year:

	THIS YEAR. Cattle.	Sheep.	LAST YEAR. Cattle.	Sheep.
Maine	480	88	335	—
New Hampshire	428	1852	293	950
Vermont	1233	2587	907	2848
Massachusetts	490	4120	397	2178
Northern New York	94	24	83	76
Canada	11	—		
Western States	3437	1764	2480	3911
Total, last four weeks,	6,173	10,435	4,495	9,963
Total, since Jan. 1, (12 w'ks,)	18,294	33,247	14,825	33,128

PRICES.

	Feb. 26.	Mar. 5.	Mar. 12.	Mar. 19.
Beef, 1st, 2d & 3d qual	5½@7½	5½@7½	6½@7½	6½@8
" a few extra	7½@8	7½@8½	8 @8½	8½@8¼
Sheep and lambs, ℔ lb	6 @7½	7 @8	7½@8½	8 @9
Swine, stores, wh'sale	5½@6½	5½@6½	5 @5½	5½@6¼
" " retail	6 @7	6 @7	6½@7	6½@7½
Hides, ℔ lb	.8 @8½	8 @8½	8 @8½	8 @8½
Pelts, each,	$2½@3	$3 @4	$3 @4	$4 @4½
Tallow, ℔ lb	8½@9	8½@9	8½@9	8½@9

REMARKS.—During the past month the sales at this market, of both cattle and sheep, have been quick, and prices have pretty steadily advanced. With so many of our New England men in the service of their country and far from this market, it is remarkable that the first twelve markets of last year were better supplied with 14,825 head of cattle, than it has been this year, with 18,294 head for the same time. The number of sheep at market thus far this year is just about the same as that reported last year. Prices are nearly 3 cents ℔ lb. higher on live weight than last year.

The large pair of oxen mentioned last month, from Auburn, N. Y., which weighed 6390 lbs. at home, dressed 51 ℔ cent. of their weight in Albany,—a shrinkage of only 19 ℔ cent. The rough tallow of the best ox weighed 384 lbs., which Mr. J. F. Taylor, who dressed them, said was about the highest amount on record; his mate had 244 lbs. of tallow.

For the purpose of comparison, we asked liberty of Mr. Taylor to copy some one of his bills of the weight of Northern oxen. He gave us, at random, the following, of six oxen, just slaughtered, raised in Vermont, and bought by him, Feb. 27th, at 7c ℔ lb., to kill and weigh, and which he said were a fair bunch of country oxen:

	1st Ox.	2d Ox.	3d Ox.	4th Ox.	5th Ox.	6th Ox.
Weight of Hide	102	112	87	118	100	120
Weight of Tallow	44	47	65	60	36	85
Weight of Meat	826	788	768	834	760	1014
Dressed weight	972	947	920	1012	896	1219

The cattle mentioned below were at market March 19.

THE HOITT OXEN.—Certain butchers in Brighton have been aware for some months that there was an uncommonly fine pair of oxen in the stall of Gen. Alfred Hoitt, of Durham, N. H. This week these oxen are at market, where they fully sustain their reported excellence. Bullocks with larger bones and more tallow may have been sold in Brighton, but we heard several of the old butchers say that, for beauty of form, symmetry of limb, and, in fact, for everything that constitutes perfection in the ox, a better pair probably never stood in the yards of that market. They were of a bright red color, seven years of age, and, Mr. Hoitt said, about half Durham. They were raised in the town of Durham, which some one remarked was noted for the fattening qualities of its pastures and of its hay. They have been fed with meal ten months, with great precision and regularity, consuming just 150 bushels. They were fed twice a day, four quarts of meal being mixed with chopped hay, for each ox. They were said to measure over 9 feet, and their weight was estimated at 5000 to 6000 lbs. They are to be slaughtered this afternoon by J. F. Taylor, who will exhibit their beef at his stall, 71, Quincy Market, and perhaps show a photograph, which we understand is to be taken of them to-day.